A NEW FINANCE FORMULA DESIGNED TO STRENGTHEN EQUAL EDUCATIONAL OPPORTUNITY FOR STUDENTS IN OKLAHOMA PUBLIC SCHOOLS WHEN COMPARED TO CRITERIA ESTABLISHED BY THE NATIONAL EDUCATIONAL FINANCE PROJECT

By

DAVID RAY OWENS

Bachelor of Science in Education
Southeastern Oklahoma State University
Durant, Oklahoma
1963

Master of Teaching
Southeastern Oklahoma State University
Durant, Oklahoma
1966

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF EDUCATION
May, 1980

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Thesis Approved:

Carl R. Fulton
Thesis Adviser

Richard P. Jungeen

Kenneth St. Clair

Kenneth E Wiggins

Norman N. Durham
Dean of the Graduate College

PREFACE

This study is concerned with the concept of equalization of educational opportunity. It is based on the realization that the school districts in the State of Oklahoma do not now provide equality of educational opportunity to their students. Attention is called to this fact by the courts which have found that the present system of school finance discriminates against the poor by systematically denying equal opportunities for students in poor districts as compared to students in rich districts.

The study includes four basic results. First, the author attempts to review and relate many of the diverse and sometimes conflicting interpretations of the concept of equalization of educational opportunity, and then presents his own definition of the concept. Second, a new formula for the distribution of Oklahoma school funds is presented. Third, the new formula is actually applied to the 622 Oklahoma school districts. Fourth, the resultant distribution program is evaluated according to criteria established by the National Educational Finance Project Typology. This evaluation verifies that the formula presented in this study does strengthen educational opportunity for students in Oklahoma public schools.

A note of special thanks is given to Dr. Carl Anderson and Dr. Kenneth St. Clair for their assistance and interest in this study. The author also gratefully acknowledges the encouragement and assistance rendered by the other members of his doctoral committee: Dr. Richard Jungers and Dr. Kenneth Wiggins. In addition, appreciation is extended to the Board of Education of the Piedmont Public Schools for their understanding and cooperation in this endeavor. Finally, the author is indebted to his wife, Dr. Glenda Owens, who inspired, offered solace, and helpfully criticized.

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CHAPTER I

INTRODUCTION

The courts have recently handed down precedent-setting rulings on the financing of public education, rulings that may significantly modify the financing of the nation's public schools. In particular, according to Johns and Morphet (24), equalization of educational opportunities has been a legal issue since the 1971 Serrano case in California. The impact of the Serrano decision and many other similar cases has not yet been fully realized; however, one immediate result has been the evaluation of many state finance programs with respect to equal educational opportunities for all students.

Even though pressures for better and improved education continue to be exerted, the inflationary spiral of the last two decades has raised the costs of education to such high levels that citizens of many school districts are refusing to approve further increases in their tax levies. On the other hand, the rising economy has provided more tax revenues, permitting public schools to meet, in part, their steadily increasing financial requirements.

It is readily understood that requirements of the future will necessitate increased funding of current programs

and additional funding of new programs. Since the courts have found that the present system of school finance discriminates against the poor by systematically denying equal educational opportunities for students in poor districts as compared to students in rich districts, innovative finance programs are essential to the future of the nation's public schools.

Speculation abounds on how to adequately finance public schools and also provide equal educational opportunities for all students. Escalating inflation is generally not recognized as an advantage to school finance programs even though a growing economy allows increased equalization without any reduction in revenues to individual school districts. In fact, inflation provides the potential for a sufficient, valid, and usable finance formula that would move toward equal educational opportunities. The idea of using inflation to increase equalization in the public schools of Oklahoma is the central thesis of this study.

Statement Of The Problem

The problem is to develop a formula for distribution of state funds for the common schools of Oklahoma which will equalize educational opportunities among students of all Oklahoma school districts in a more equitable manner than the present distribution method.

Research questions to be considered include:

1. What are some factors which determine equal

educational opportunities?

2. Does the formula presented in this study more closely approach the concept of equal educational opportunity than the 1978-79 Legislative approved program?
3. How does the formula presented in this study rate when evaluated by the National Educational Finance Project Typology?
4. How does this formula work when applied to all school districts in Oklahoma?
5. What recommendations can be made for the future of Oklahoma school finance?

Definitions Of Terms

The following terms are collected and defined for the convenience of the reader. These terms will be used throughout this study. Other significant terms will be appropriately defined as they are introduced in the study.

Assessment Ratio: The ratio of assessed value to true market value.

Inflation: An increase in the amount of money in circulation, resulting in a fall in its value and a rise in prices.

Leveling-up: The gradual attainment of higher and higher levels of financial adequacy in education as follows: No school district need receive a reduction in state aid, but wealthy districts should receive minimal increases, if any, while poor districts should receive substantial increases.

Hence, the poorer districts are eventually "leveled-up" to the position of the wealthier districts.

Local Revenue: Funds defined in the 1977-78 Annual Report (11) as "Local and County Revenue". The bulk of such funds is provided through property taxes as assessed by the county assessors.

Miscellaneous and Dedicated Revenues: Funds classified as "Dedicated Revenue" or "State Miscellaneous Revenue" in the 1977-78 Annual Report (11).

NEW FUNDS: State common school revenue in excess of the total state-aid allocations to public schools for the preceding year. The amount of NEW FUNDS varies from year to year.

Sparsity: Refers to school districts in which students are thinly distributed.

Special Education Student: A student who, according to Pierce, Garms, Guthrie, and Kirst (40), differs from the average student in mental, sensory, physical, social, emotional, or communication abilities to such an extent that he requires special educational services in order to develop to his maximum capacity.

State Aid Revenue: Funds classified as "State Aid" in the 1977-78 Annual Report (11). These funds are allocated to common schools according to the general state aid formula.

True Market Value: The price that a commodity can be expected to bring when sold in a given market.

Significance Of The Study

This study is significant in that it presents a possible solution to the century-old problem of strengthening equal educational opportunities for all public school students within a particular state. It presents a definition of equalization of educational opportunity based on the conclusions that absolute equalization of educational opportunities is neither possible nor desirable. It then presents a formula which will use inflation as a means to enhance equalization of Oklahoma school funds, and which will equalize local tax burdens, provide students with eventual equal potential access to dollars, and result in the dependence of available revenue only on the wealth of the State as a whole. This study will also provide legislators and professional educators a plan for the distribution of Oklahoma school funds which will rank higher in equalization of educational opportunity than does the 1978-79 Legislative approved distribution program, when evaluated by the National Educational Finance Project Typology.

Limitations Of The Study

The distribution formula presented in this study will require NEW FUNDS which are readily available in an inflationary economy. It will be applied each year only to that portion of the state appropriations for common schools which exceeds the similar appropriations of the preceding year.

The formula will also assume that property assessment is based on true market value. It will use the property tax and the property tax assessment ratios to compare the school districts in order to approach equalization of educational opportunities through the appropriate distribution of state educational funds.

The evaluation of the distribution program resulting from the formula will rely solely on the National Educational Finance Project Typology, hence the validity of that typology is assumed.

This study will apply only to state and local funding, no federal funds will be considered. All aspects of this study will conform to the Constitution and to the State Laws of Oklahoma.

CHAPTER II

REVIEW OF THE LITERATURE

History Of The Problem

Since the beginning of this country as a nation, factors have been at work extending and protecting the rights of American citizens, and society itself has been making slow, but consistent, progress in improving and equalizing the rights of individual citizens.

Equality in education was one of the basic needs emphasized by the founders of this nation. As early as 1642, the Massachusetts colony passed laws which specified a minimum educational program for all communities. Other early accomplishments are summarized by Cyr, Burke, and Mort (9):

> Robert Coram said in 1791: 'There can be no equal representation until there is an equal mode of education for all citizens.' At another time he wrote: 'If education is necessary for one man, my religion tells me that it is equally necessary for another.'
>
> Thomas Jefferson wrote to Washington in 1786: '. . . our liberty can never be safe but in the hands of the people themselves, and that too, of a people with a certain degree of instruction.'
>
> Thomas Paine believed that in a properly governed nation none should be permitted to go uninstructed.
>
> Samuel Smith said: 'Society must establish the right to educate, and to acknowledge the duty of

having educated, all children.'. . .

> As our country got under way, statesmen and leaders spread these ideals and tried vigorously to have them put into practical effect. George Washington urged his country: 'Promote then, as an object of primary importance, institutions for the general diffusion of knowledge. In proportion as the structure of a government gives force to public opinion, it is essential that public opinion should be enlightened.'
>
> In 1835 Thaddeus Stevens, addressing a Pennsylvania assembly which had voted against a law to set up public schools, aroused the legislators so much by the force of his plea, that they turned around and voted for it. Some of his words which stirred the meeting so deeply are worth quoting:
>
> 'He cheerfully pays the tax which is necessary to support and punish convicts, but loudly complains of that which goes to prevent his fellow-being from being a criminal.'
>
> 'Let us so cast our votes that the blessings of education shall be conferred on every son of Pennsylvania--shall be carried home to the poorest child of the poorest inhabitant of the meanest hut of your mountains, so that even he may be prepared to act well his part in this land of freemen.' (pp. 11-13).

Prior to the twentieth century, State concern in the area of education was primarily with the stimulation of people in communities to provide and support education. This resulted in significant inequalities among districts, and according to Mort (33):

> As early as 1854, the County Superintendent of Bradford County, Pennsylvania pointed out the difficulties experienced by poorer communities in seeking to achieve desired results (p.29).

Since that time, there have been many proposals for public school finance programs, all aimed at equalization: equalization of effort; equalization of opportunities;

equalization of tax burden; equalization of tax bases; equalization of needs; equalization of educational outputs; and the like. In particular, the quest for equalization of educational opportunities has been treated by educational authorities during the past century.

Cubberley (7) made the first extensive study of state adopted fiscal policies. He presented a comprehensive review of state aid to education in the United States prior to 1905, and wrote:

> The first great step in the attempt to equalize educational advantages has been the recognition on the part of the people of the state's interest in and responsibility for the education of its children.
>
> The second great step in the attempt to equalize educational advantages will be taken when the people come to realize that a division with absolute impartiality to all is not necessarily an equitable division, and that it does not serve the purpose for which these funds and taxes were provided as well as a distribution which is proportional to the needs of a community and the efforts which it makes to help itself.
>
> The third great step in the attempt to equalize educational advantages will be taken when the state recognizes that it is its duty to help new and desirable forms of education to gain a foothold and become established and to assist necessitous communities by special grants, and, if necessary to do so because the fund at hand is small, to withdraw all aid for 'common schools' from those larger and wealthier communities which are able to care for themselves (pp. 84-85).

Cubberley indicated that the equalization of educational opportunities and also the equalization of burdens are both impossible under a system of exclusively local taxation. Therefore, he advocated some form of general aid in

any attempt toward equalization of educational opportunities. The idea of rewarding districts, in order to stimulate effort, was considered to be a basic principle. Even though Cubberley is best known for his idea concerning the desirability of the flat or non-equalizing grant, he undoubtedly recognized the need for equalization of educational opportunities when he suggested that if a shortage of available funds made it impossible to aid all programs, then the wealthier districts should be required to care for themselves.

Updegraff (47, 48) conducted studies in Pennsylvania and New York between 1919 and 1922. He advocated the principle that effort is more truly measured by the tax rate than by new activity in the school. Consequently, he proposed the idea of reward in proportion to the tax rate which would provide equalization and also stress the importance of stimulation. Updegraff (48) described his own study:

> The point most strongly emphasized in this study is the importance of considering true wealth taxable for schools and demonstrated interest in schools as vital factors in determining the share of state support that a local district should receive (p. 9).

The finance principle developed by Updegraff is known today as District Power Equalization or DPE. It basically represents a tax-base equalizing and may be considered as simply a set of free-form versions of percentage equalizing grants. Benson (2) describes DPE as:

> An arrangement between the state and its localities to produce a one-to-one positive relationship

> between expenditures per student and school tax rates, exactly in accord with the situation that would prevail if tax bases (per student) were equal all over the state (p. 351).

Updegraff was a pioneer in the area of equalization of educational opportunities and the total impact of his DPE Program has not yet been fully realized. Mort, Reusser, and Polley (37) stated their regard for Updegraff when they wrote:

> The authors remember it was said of a certain manufacturer that when other men were satisfied to paint signs on fence boards, this man was covering entire barns. Updegraff's proposals bear a similar relationship to the proposals generally made during the second decade in this century (p. 201).

In 1923, Strayer and Haig (44) in their "Educational Finance Inquiry Report" called for the establishment of a minimum educational program below which no school district would be allowed. Then they called for the financing of this minimum program in such a way that the burden would fall equally upon the people in all school districts in accordance with their taxpaying power. They suggested that:

> To carry into effect the principle of 'equalization of educational opportunity' and 'equalization of school support' as commonly understood, it would be necessary (1) to establish schools or make other arrangements sufficient to furnish the children in every locality within the state with equal educational opportunities up to some prescribed minimum; (2) to raise the funds necessary for this purpose by local or state taxation adjusted in such manner as to bear upon the people in all localities at the same rate in relation to their tax-paying ability; and (3) to provide adequately either for the supervision and control of all the schools, or for their direct administration, by a state department of education (p. 174).

Strayer and Haig are credited with the initiation of the concept of minimum educational program, now called the Foundation Program. Today, the terms Foundation Program and Strayer-Haig Program are synonomous. Mort (32) recognized the potential of the Foundation Program when, in 1936, he wrote:

> There have been few ideas which have so quickly caught fire as the definition of state responsibility for equalizing the burdens of a foundation educational program given by the Educational Finance Inquiry in 1923. This pronouncement has already become the basis for revolutionary change in the financing of schools in several states and the basis for programs of action in a majority of the others (p. 53).

The early efforts of Cubberley, Updegraff, Strayer, and Haig were joined by Henry C. Morrison who initiated the concept which became known as Full State Funding. Morrison (29) wrote:

> Our extended analysis . . . leads us unerringly to the conclusion that the several states themselves are the appropriate fiscal and administrative units in the support and conduct of the citizenship school which has long been held to be the cornerstone of our policy as a self-governing State (p. 214).
>
> . . . there is no reason whatever . . . which would not justify the state unit (p. 214).
>
> The Constitution leaves the conduct of public schools to the several states. The state constitutions do not leave it to the local districts; but on the contrary the courts have with substantial unanimity expressly held that public education is a state, and not a local, concern (p. 216).
>
> The courts have with minor exceptions held that the tax-supported schools are state schools; that the offices of the school district are offices locally elected to carry out a state purpose; that

> the school money is state money despite the fact that it is locally determined, levied, and collected (p. 87);
>
> . . . the money once raised must be spent for the purposes prescribed by law; it is not subject to the will of the local people (p. 93).
>
> The school district . . . is an agency set up to carry out a state function (p. 226).

Morrison recommended that all school funding should be done by the state. He also recognized full state funding of education as a legal responsibility of each individual state.

For many years, Updegraff's District Power Equalization, Cubberley's Flat Grants, Morrison's Full State Funding, and the Foundation Program of Strayer and Haig have been adopted, modified, combined, and modernized by the several states in their efforts toward equalization of educational opportunities among students. In 1957, Burke (5) wrote:

> Equalization programs have become the basis of state participation in school support in all but a small number of states. This emphasis is the outgrowth of over a century of concern over equalization of educational opportunity (p. 557).

The early 1970's were years of great activity in the courts, in school board meetings, and in state legislatures. One of the most noticeable results was the revival and reemphasis of certain aspects of school finance philosophy and theory of an earlier era sponsored by such almost forgotten theorists as Harlan Updegraff and Henry C. Morrison.

Legal Aspects Of The Problem

Traditionally, state legislatures have had the privi-ledge of considerable latitude in their options as they adopted public school financing systems. However, recent court decisions may have narrowed the range of finance models available to a particular state. In 1972, Johns and Morphet (24) wrote:

> Recent court decisions in four states may well change the national pattern of support for public elementary and secondary schools. In essence, the litigation has contended that a 'school financing system, with its substantial dependence on local property taxes and resultant wide disparities in school revenue, violates the equal protection clause of the Fourteenth Amendment' (to the Constitution of the United States) (p. 67).

According to Johns and Morphet (24), the California case, Serrano v. Priest, of 1971 resulted in the statement:

> Recognizing as we must that the right to an education is a fundamental interest which cannot be conditioned by wealth, we can discern no compelling state purpose necessitating the present method of financing (pp. 67-68).

The Serrano opinion laid the groundwork for education as a fundamental interest. According to Johns and Morphet (24):

> From the standpoint of legal precedent and the application of the equal protection provision of the Constitution of the United States in litigation of this nature, the matter of education as a fundamental interest is a crucial issue. In laying the groundwork for education as a fundamental interest, the court stated that education's role had two important aspects: 'first, education is a major determinant of an individual's chances for economic and social success in our competitive society; second, education is a unique influence on a child's development as a citizen and his

participation in political and community life.'

> Serrano did not ignore previous precedent to the contrary, but ruled that equal protection was denied when the state school financing 'system conditions the full entitlement to such interest on wealth, classifies its recipients on the basis of their collective affluence and makes the quality of a child's education depend upon the resources of his school district and ultimately upon the pocketbook of his parents.' Such state financing program 'produces substantial disparities among school districts in the amount of revenue available for education.' School financing programs which result in these disparities deprive pupils of equal protection, according to Serrano and the other related court decisions (p. 68).

The Robinson v. Cahill case was heard by the Supreme Court of New Jersey, Hudson county. As stated by Johns and Morphet (24), the court found that:

> The present system of financing public elementary and secondary schools in New Jersey violates the requirements for equality contained in the State and Federal Constitutions. The system discriminates against taxpayers by imposing unequal burdens for a common State purpose (p. 69).

This second contention focuses on the problem of taxpayer equity as well as equal access to funds for support of education. The Robinson case gave considerable attention to local educational decision making, and supported the concept that educational goals should meet community needs. Johns and Morphet (24) indicated that, in clarification of the Robinson case, the court stated:

> This is not to suggest that the same amount of money must be spent on each pupil in the state. The differing needs of pupils would suggest the contrary. In fact, the evidence indicates that pupils of low socio-economic status need compensatory education to offset the natural disadvantages of their environment (p. 70).

Johns and Morphet (24) wrote that, in the case of Rodriguez v. San Antonio Independent School District, a Federal Court in Texas found:

> . . . merit in plaintiff's claim that the current method of state financing for public elementary and secondary education (in Texas) deprives their class (children throughout Texas who live in school districts with low property valuations) of equal protection of the laws under the Fourteenth Amendment to the United States Constitution (p. 69).

The court further stated that the question was not only the lack of funds, but that the poverty was that of a governmental unit that the state itself had defined and commissioned.

According to Johns and Morphet (24), in the case of Van Dusartz v. Hatfield, the Federal Court in Minnesota concluded that:

> . . . a system of public school financing which makes spending per pupil a function of the school district's wealth violates the equal protection guarantee of the Fourteenth Amendment to the Constitution of the United States (p. 72).

The four cases: Serrano, Robinson, Rodriquez, and Van Dusartz, were summarized by Johns and Morphet (24) in their "Study Guide For Planning School Finance Programs".

> In summary, all four cases have declared the legal principle that a state support program is unconstitutional if 'it makes the quality of a child's education a function of the wealth of his parents and neighbors.' In Robinson the court went further and supported the concept of differing costs for different groups of school pupils, as well as contending that the requirement for a 'thorough and efficient system of free public schools' was too important to be left 'to the mood - in some cases the low aspirations - of the taxpayers of a given district, even those whose children attend

> schools in the district.' In this instance the court appears to be endorsing a uniform support program for a given state, but one which contains the cost differentials or a programmatic budget related to various educational programs. However, the New Jersey court was the only instance in which this last point was presented.
>
> The findings of the four courts have been generally consistent in supporting the concept of a pupil's right to 'equal access to dollars' irrespective of the wealth which may be located in the district of residence. The courts appear to have rejected any measure of 'wealth other than the wealth of the state as a whole.' This finding has monumental implications for state support programs in virtually all states, and will lead to revolutionary revisions of school support programs if the court decisions are extended to all states. A second pupil right might be phrased as 'equal access to educational program' or a recognition of the varying educational needs of the different groups of pupils. Robinson was the only case in which direct attention was given to this matter, but the other cases did reject the extension of equal protection to include equal educational expenditures per pupil among school districts within a state (pp. 72-73).

In the aftermath of Serrano, there appeared to be only two plans of state school finance programs that would meet the conditions now being specified by the courts. These were: (1) Full State Funding (Morrison's concept), and (2) District Power Equalization (Updegraff's idea).

Following, almost immediately, the 1971 Serrano decision, the Fleischmann Commission (45) stated:

> The state shall determine a defensible basis of distributing money to school districts. Equal sums of money shall be made available for each student, unless a valid educational reason can be found for spending some different amount (p. 62).

In particular, the Fleischmann Commission in New York issued its recommendations that New York State take over

full responsibility for financing the public school districts within the state. Improvements in equity under the school finance reform movement can also be claimed in a number of other states. At the present time, most states are edging toward the illusive goal: equalization of educational opportunities.

The Concept Of Equalization Of Educational Opportunity

Equalization of educational opportunity does not mean that each person should receive as much education as every other person. It is not possible that all students will be capable of attaining the highest levels of education; nor is it likely that all school systems will be able to provide the same educational services. Also, as reported by Garvue (14):

1. Some children know more than others when they enter school, and others have a strong motivation to learn.
2. Not all children can receive instruction from the one teacher who is best for them in a given year.
3. Children learn from each other, but not every child can be put with the one group from whose presence he will profit most.
4. Schools cannot cater to all individual vocational needs (p. 131).

Other factors such as differences in the communities, in the aspirations of the people, and in the backgrounds of the students, as well as in the environment, organization,

and administration of the schools, would necessarily result in differences in educational opportunities among students. Each student is so affected by his home and neighborhood environment that equality of opportunity cannot be provided by the schools alone. In reality, equality of educational opportunity is not attainable in a single school system. And Burke (5) indicates that it is not actually desirable in a decentralized school system. Grubb and Michelson (16) wrote:

> Schools should not produce a fixed set of outputs (test scores, abilities to get specified jobs, etc.) in order to satisfy a fetish for equality. From the child's point of view, there may be nothing desirable about being fitted into the state's concept of output equality. The crucial question in education should not be how to turn out students who are similar in 'important' ways, but how to assume some fair treatment by society in access to resources while in school (p. 7).

Morphet (28) also stressed the undesirability and the impossibility of identical educations for all children. According to Johns and Alexander (19):

> Absolute identity of educational opportunity for all children is not possible nor even desirable because children with different needs require different types of educational opportunity in order to equalize their chances for obtaining an education commensurate with their needs. School children vary greatly in cultural background, in native ability, in interest, in physical and mental handicaps, and other factors . . . It is not possible to equalize all of these factors (p. 234).

Morrison (30) emphatically supported this theory when he stated:

> No serious, well-informed, and level-headed advocate of equalization has in mind equality of

> education. That is, for the present at least, beyond human achievement. It is not to be expected that all men will be equally capable of attaining the highest levels of education; . . . It must be recognized, . . . that financial support is not the only support upon which education must rely. Equalization does, however, imply that in so far as equal opportunity for the individual citizen to make the most of his native capacities depends upon just distribution of the public revenues, such distribution ought to be made (p. 39).

These comments indicate that equalization of educational opportunities is both impossible and undesirable in its most strict interpretation. However, it has long been a basic goal of the American educational system. In fact, equalization programs have become the basis of state participation in public school support. What constitutes equality, however, is strictly a value judgment and there are wide differences in interpretation; no general agreement on a precise definition of equalization of educational opportunity has been reached.

In 1905, Cubberley (7, pp. 27-28) wrote that state aid should be distributed "in definite relation to the needs of the community and to the efforts which it makes to provide good schools." Strayer and Haig (44), the authors of the Foundation Program, stated that:

> In its extreme form the interpretation (of equalization of educational opportunity) is somewhat as follows: The state should insure equal educational facilities to every child within its borders at a uniform effort throughout the state in terms of the burden of taxation; the tax burden of education should throughout the state be in relation to the tax-paying ability, and the provision for schools should be uniform in relation to the educable population desiring education (p. 173).

Burke (5) states that the equalization principle is very difficult to define. He further indicates that it involves five elements: Program, Personnel, Financial Support, Financial Resources, and Tax Burden. The Strayer-Haig, or Foundation, Program is the basic effort toward equalization of programs. Very little effort has been expended toward equalization of personnel. Barro (41) states that the problem of equalizing teacher quality, in particular, is likely to remain intractable for some time because of lack of data and also lack of a definition of teacher quality. Most equalization efforts have dealt with equalization of financial support. However, many prominent school finance experts and professional educators warn that simply providing equal money per pupil will not equalize educational opportunities among students. Types of financial resources vary less than other elements of equalization, but some radical and significant reforms have been studied in attempts toward equalization. Finally, tax burden has been almost as popular as financial support as a focus in equalization programs. Many definitions of equalization of educational opportunity require equalization of local tax burdens as well as equalization of local financial support.

The following definitions have been made by various writers and are presented by Burke (5):

1. 'Education within a democratic culture must provide for equality of individual opportunity in accord with inborn capacity so that an individual will not be deprived of educational advantages because of race, religion, age,

geographic location, physical, social, or economic conditions (p. 217).'

2. 'The principle of equalization or equity is not concerned with equal rewards or outcomes, but with equal chances or opportunity. Since this is admittedly an inexact area, the concern is not with exact equality, but rather with 'reasonable' equivalence (pp. 217-218).'

3. '. . . the maximum approvable educational opportunity may be conceived as the program . . . which has for its objective the development of the individual to the fullest extent of his capacities (p. 218).'

4. 'Equality of opportunity is not to be considered in the absolute. There are practical difficulties which make it unthinkable to attempt equalization to secure identical conditions for all children and even absolute equity of costs to all supporters of education. . . . the aim should be to remove the most extreme conditions . . . (p. 218).'

5. 'This analysis interpreted the so-called equalization principle as the complete equalization of the burden of a satisfactory minimum educational program below which no locality would be allowed to go . . . (p. 218).'

6. 'Equality of educational opportunity means not an identical education for all children, but the provision . . . of at least certain minimum essentials in the provision of schools, their supervision, and their financial support (p. 218).'

According to Burke (5), since 1920 the definition of equalization made by Strayer and Haig, and applied by Mort, has been widely adopted. That is, equality of educational opportunity aims to equalize opportunity to a certain level and also to equalize burdens to a certain level. In Mort's (31) words:

> Equalization of educational opportunity - a minimum satisfactory offering with the burden falling equally on all parts of the state - has come to be

> accepted as a fundamental principle in our democracy, and it cannot exist without state aid (p. 90).

Cubberley (7) also advocated that the prime purpose of a state apportionment plan should be that of equalizing, as far as possible, with available funds, both the 'burdens of maintenance' and the 'opportunities for education' throughout a state. The Fleischmann Commission (45) recommended strict equalization only to the sixty-fifth percentile.

Just as there is much confusion about the meaning of equalization of educational opportunity as an educational concept, there is also confusion about its meaning as a legal concept. The legal definition is still evolving. In the federal courts, the concept has been treated primarily in cases involving the interpretation of the Equal Protection Clause of the Fourteenth Amendment of the United States Constitution: "No state shall . . . deny to any person within its jurisdiction the equal protection of the laws." According to Browning and Long in the 1974 Rand Educational Study (41):

> The law has, to date, dealt with the following kinds of educational inequalities:
>
> 1. Equal services and facilities among racial groups (e.g., in school plant, per-pupil expenditures, teacher experience).
> 2. Equal intangible factors among racial groups (e.g., morale, prestige, expectations in school).
> 3. Equal or balanced racial compositions of the school.

4. Equal consequences of the school for individuals from rich and poor backgrounds.

5. Equal public resources to the schools regardless of the wealth or poverty of the school district (pp. 82-83).

According to Garvue (14), a California State Fact-Finding Committee on Revenue and Taxation reported, in 1965, three possible interpretations of equality of educational opportunity:

1. Each child shall be offered opportunities to develop his own inborn talents to the fullest degree of which he is capable.

2. Each child is provided with schooling in accordance with his 'age, aptitude, and ability.'

3. A and B have equality of educational opportunity when they live under conditions that do not provide either person with any material advantage over the other in selecting or pursuing his educational goals (p. 131).

Finally, Barro (41) defines equalization as the reduction of existing inequalities in access to educational programs and in the tax burdens that must be shouldered to obtain a given level of school support. He states further that this reduction of existing inequalities depends upon fiscal abilities, tax efforts, and educational needs of the school districts.

In summary, equalization of educational opportunity means opportunity to be educated. It is not a fiscal term at all, but rather the basis for State fiscal responsibility and planning. The concept is not to be considered in the absolute, nor is it desirable in its most strict sense. The true function of the equalization principle is the leveling

up of educational opportunity without leveling down opportunities. It is the gradual attainment of higher and higher levels of adequacy in education.

The search for equality, which has been the focal point of interest in school finance programs for almost a century, has resulted in many acceptable definitions of equalization of educational opportunity. In practice, the concept basically assures enough money to provide comparable programs for students when their different needs and the costs of providing for them have been taken into consideration. That is, the concept provides comparable or equivalent programs and also comparable or equivalent burdens among the State school districts.

The preceding discussion leads to three prominent conclusions:

1. Complete attainment of equalization of educational opportunity is impossible.
2. Absolute equalization of educational opportunity is undesirable.
3. It is imperative, both legally and ethically, that States move toward equalization of educational opportunity.

These conclusions motivate the following definition of the concept of equalization of educational opportunities.

The Definition Of Equalization Of Educational Opportunities

Equalization of Educational Opportunities is the reduction of inequalities in potentials for educational

success and in tax burdens among localities. That is, equalization of educational opportunities is equal opportunity for each individual student to make the most of his native capacities and also equal tax burdens that are essential for the provision of a given level of school support. Wise (51) states:

> What should be equalized is access to education, not education. The amount of educational resources invested in anyone may differ; but it should be determined by the same relevant criteria for everyone, rather than by irrelevant ones such as wealth of parents, or color . . . (p. 154).
>
> Equality of opportunity never prevents inequality of results achieved by various persons but rather equalizes the opportunity (insofar as it depends upon society) of achieving these unequal results. Some people will be more educated, and some less, if the same relevant criteria are applied to all, but to the extent it can be determined by any rule, the right people will respectively be more and less educated (p. 154).

CHAPTER III

THE PROPOSED EQUALIZATION FORMULA

Intent Of The Equalization Formula

A distribution formula for the apportionment of Oklahoma school funds is presented in the present chapter. This formula will encourage equalization of tax assessments and ultimately result in state-wide equalized tax rates. It will also move toward equalization of school financial support through a "leveling up" process. Garms, Guthrie, and Pierce (13) state:

> The easiest way to institute school reform is to have sufficient state money available so no district need receive less state aid than previously. Those that benefited under the former system would receive minimal increases; those that had fared badly before would receive larger increases in state aid. This "leveling up" method is politically the easiest way to institute reform; no district is actually harmed in the sense of getting less than formerly (p. 236).

The formula will also require uniform efforts among school districts by imposing penalties on those districts not meeting State recommended tax standards. For the purposes of this study, the formula will be referred to as The Proposed Equalization Formula, or more briefly, The Proposed Formula.

The general intent of The Proposed Formula is to satisfy the definition of equalization of educational opportunity

stated in the preceding chapter, namely, to reduce inequalities in the potentials for educational success among State school students, and also to reduce inequalities in tax burdens among Oklahoma school districts. The Proposed Formula will result in both equity and adequacy. It is designed to remove extreme conditions that exist among Oklahoma school districts under the 1978-79 distribution program.

Local Support Ability

Equalization of educational opportunity, as defined in Chapter II, relies on the distribution of overall tax burdens among school districts on the basis of ability to pay, that is, local support ability. The distribution must require all school districts to contribute the full legal limit of local school taxes to the cost of their educational programs. Also, according to Johns and Morphet (25), if a state uses an equalization model specifying the required local effort in terms of mills, the required levy should be based on the equalized value of property, not the assessed value.

Currently, in the State of Oklahoma, the legal rate of local taxes for public schools is thirty-nine (39) mills. Local revenue is determined in a uniform manner for all districts by calculating 3.9% of the total net assessed valuation of property. However, significant inequities exist in assessments of property. At the present time, Oklahoma assessment ratios vary from 7% to 15.22% among counties.

Oklahoma State Law specifies an average State assessment ratio of 12%, but permits ratios between 9% and 15%.

The Proposed Equalization Formula will encourage all districts to employ equal assessment ratios by requiring a penalty of those districts failing to comply with the uniform assessment ratio specified by The Proposed Formula.

During the first year of its application, The Proposed Formula will equalize assessment ratios with a uniform assessment ratio of 10%. The uniform assessment ratio will be increased by 1% per year until it reaches 12% during the third year of application of The Proposed Formula.

Under The Proposed Formula, two types of school districts will be penalized for failing to comply with the specified uniform assessment ratio: (1) districts which qualify for state aid under The Proposed Formula and which use assessment ratios that are less than the uniform assessment ratio; and (2) districts which qualify for state aid under The Proposed Formula and which use assessment ratios that are greater than the uniform assessment ratio.

Each district in category (1) will be assessed a direct penalty as calculated by the following formula:

Tax Penalty = (.039) x (TAV) x (1 - (DAR)/(UAR)),

where TAV denotes Net Total Assessed Valuation, DAR denotes District Assessment Ratio, and UAR denotes Uniform Assessment Ratio.

Districts in category (2) will be penalized indirectly by using local revenues in lieu of state funds. That is,

the amount of taxes collected in excess of taxes required by the uniform assessment ratio will be used by the district in lieu of that amount of state funds.

During the third year of its application, The Proposed Equalization Formula will result in a state-wide equal assessment ratio of 12%. This will minimize inequities in tax assessments and move toward equalization of tax burdens among school districts, provided property assessments have been based on true market value. Such assessments have been assumed for the purposes of this study, even though they do not abound in Oklahoma at the present time.

Allowances For Special Needs

A distinction is made between revenues provided for general operating purposes and revenues reserved for particular, specifically designated uses, such as the transportation of pupils or a special curriculum for special education. The reservation of revenues for areas of special need is essential since some educational and management services differ significantly among school districts. According to Pierce, Garms, Guthrie, and Kirst (40):

> Regardless of the financial equalization plan selected, policy makers should consider providing added resources for (1) unusual instances of economic hardship, and (2) special instances of instructional enrichment (p. 13).
>
> Equal educational opportunity, then, cannot be guaranteed by equalization of fiscal ability alone. Specific educational needs should be taken into account. Any state program directed toward equity must consider those instances where it

> costs schools more to provide an adequate education (p. 70).
>
> It is necessary, therefore, to adjust a basic school finance formula that assures equality of tax effort by including categorical grants or other differential factors (p. 70).

Berke and Goettel (41) studied areas of special need and the use of categorical grants for the funding of special services. They stated four guidelines for determining funding mechanisms for categorical grant programs:

> 1. When all districts provide a service and there is little variation in need among districts: The state should include aid for such services in the general operating aid formula.
>
> 2. When all districts provide a service to some degree, but there is marked variation in need for the service among districts: The state should assume (1) the entire cost of the function . . . or (2) the entire excess cost beyond what is comparable to educating a pupil in a regular instructional program . . .
>
> 3. When the need for a special service is severe for only a small number of districts: The state should assume the full costs of the relatively unusual service . . .
>
> 4. When the functional purpose is programmatic innovation (ESEA Title III, ESEA Title VI) or expansion of new programs: The state should (1) make the local share (where one is required) directly related to wealth; and (2) assure that such projects are allocated to all types of school districts (pp. 252-253).

Pincus (41) records that categorical aid is used to account for differences in need, and Jones (26, p. 41) indicates that "some special aids continue in existence because they represent needs which are not felt equally by all school districts."

It should be emphasized that the areas discussed in

this section require expenditures beyond those guaranteed by the general operating aid program. To expect local school districts to assume the added costs of funding these special needs does not serve the cause of equal educational opportunity.

There is a profusion of categories in which special aid is possibly required. For instance, NEFP (20) recommended categorical aid for the following areas: early childhood education, special education, compensatory education, vocational education, adult and continuing education, and special services such as food and transportation. Pierce, Garms, Guthrie, and Kirst (40) stated:

> In Oregon, we believe additional state expenditures for special education, compensatory education, school facilities, transportation, and necessary but costly small schools would substantially improve the equity of the state's school finance system (p. 70).

Most authors who treat the topic of special grants or categorical aid include the areas of early childhood education, compensatory education, vocational education, special education, and pupil transportation.

In Oklahoma, all districts provide some aspects of early childhood education, and there is little variation in need among districts. According to Section 14 of School Laws of Oklahoma, 1978 (12):

> All children between the ages of five (5) years . . . and twenty-one (21) years . . . shall be entitled to attend school free of charge in the district in which they reside (p. 23).

Consequently, kindergarten is provided by each Oklahoma

school district. Additional services in the area of early childhood education are available through federal aid programs. Berke and Goettel (41, p. 247) indicated that "Preschool education is now widely accepted under 'headstart' auspices."

Since early childhood education in the form of kindergarten is a service provided by all Oklahoma school districts, with little variation in need among districts, it fits the first Berke and Goettel guideline, as stated above. Therefore, the State of Oklahoma should include aid for early childhood education in the general operating aid formula. That is, The Proposed Equalization Formula should make no special allowance for early childhood education.

Compensatory education was virtually nonexistent before the federal government incorporated individual characteristics of students into a school finance formula with the 1965 Elementary and Secondary Education Act (ESEA). According to Pierce, Garms, Guthrie, and Kirst (40):

> Passage of the ESEA was justified on grounds that a substantial portion of the elementary and secondary school population was 'educationally disadvantaged' and, unless assisted, such students would not maximize their potential as individuals nor become full participants in the nation's economy (p. 81).

Since 1965, the federal government has promoted compensatory education through many programs. In fact, at present there is a unit responsible for compensatory education in the United States Office of Education.

Johns, Alexander, and Rossmiller (22) state that

compensatory education:

> . . . refers to programs of special and extra services intended to compensate for a complex of social, economic, and educational handicaps suffered by disadvantaged children (p. 98).

They define the "socially disadvantaged" as follows:

> . . . a group of populations which differ from each other in a number of ways, but have in common such characteristics as low economic status, low social status, low educational achievement, temporary or no employment, limited ready potential for upward mobility (pp. 1-2).

Bloom, Davis, and Hess (4) refer to compensatory education as follows:

> . . . a system which can prevent or overcome earlier deficiencies in the development of each individual. . . . It is a type of education which should help socially disadvantaged students without reducing the quality of education for those who are progressing satisfactorily under existing educational conditions (p. 6).

Johns, Alexander, and Rossmiller (22) indicate that:

> Compensatory education will be assumed to mean special educational provisions or adaptations designed specifically to overcome learning difficulties or handicaps in school associated with poverty, class, status, nationality, race, cultural background, home conditions or adverse environmental conditions generally, as distinguished from organic causes (pp. 98-99).

Johns, Alexander, and Rossmiller (22, p. 98) also indicate that "the concept appears to include much of what is often referred to as urban education."

Since most Oklahoma school districts are considered to be small schools, the problems of core cities and densely populated areas are not prevalent in Oklahoma. Also, those districts requiring funding of compensatory education

programs are served by the federal government. Therefore, no special allowance for compensatory education will be used by The Proposed Equalization Formula.

Vocational education serves the primary goal of preparing people for work. Therefore, it is often referred to as occupational education.

Programs in this area should be designed to help students evaluate their own potentials in relation to the multitude of occupational opportunities offered by modern society. According to Johns, Alexander, and Rossmiller (22):

> A healthy and growing economy requires an education program that prepares all its people to become active contributing participants . . . (p. 125).
>
> There is no place in the world of work for the uneducated person who has not learned how to work. Nor is there much place for the person who has not learned how to learn. The total educational process is increasingly tied to the work required by society (p. 124).

This leads to the conclusion that vocational education should be available to all secondary students.

Each Oklahoma school district has the opportunity to be a participating member of an area vocational-technical school. The area vocational-technical schools are funded independently of the common schools. That is, the general state aid allocation to a particular school district is not affected by its membership to an area vocational-technical school.

Theoretically, in Oklahoma, vocational education is an optional service which may be provided by each district.

Consequently, the variation in need among districts is relatively negligible because of the availability of the area vocational-technical schools. This leads to the conclusion that vocational education satisfies the first guideline presented by Berke and Goettel, hence the State should fund vocational education through the general operating aid formula. For this reason, The Proposed Equalization Formula will not employ a special allowance for vocational education.

Johns and Morphet (25) indicated that a special allocation for vocational education resulted in the following difficulty:

> The provision of separate funds tends to divide the interests of people, with the result that many in vocational education seem to have been more concerned with the appropriations for vocational education than for the regular programs; similarly, other educators have been primarily concerned with appropriations for the regular program (p. 345).

The decision to provide no special allowance for vocational education will eliminate this division among individuals, and also provide greater equality among districts through the use of the area vocational-technical schools.

The Proposed Equalization Formula will respond to special needs in the areas of transportation, special education, and costly small schools. These particular areas were selected because they, of the areas considered, vary most significantly among Oklahoma school districts.

Prior to the leveling up process, The Proposed Equalization Formula will recognize a special allowance for each

of the three selected areas of special need. The three allowances are defined below.

Transportation Allowance

Transportation needs and costs vary significantly among school districts. If districts are required to finance transportation costs from local funds they must make extra effort over and above that required of other districts that have little or no transportation costs.

Since most Oklahoma districts provide pupil transportation and there is marked variation in need for the service among districts, transportation fits the second Berke and Goettel guideline stated earlier. Hence, transportation necessitates special treatment in a state aid formula.

Prior to the leveling up process, The Proposed Equalization Formula will recognize a special transportation allowance for each school district which must provide pupil transportation. This allowance will be referred to as Transportation Allowance and is defined as follows:

Transportation Allowance = (PCA) x (ADH) x (TE/TA), where PCA denotes Per Capita Allowance as used in School Laws of Oklahoma, 1978 (12); ADH, average daily haul, denotes the average daily attendance of transported students; and TE denotes the total revenue actually expended by all Oklahoma school districts for pupil transportation. These data are listed in The Annual Report (11). Finally, TA denotes the total of all monies assigned to all districts

according to the following scale, as presented in School Laws of Oklahoma, 1978 (12, pp. 166-167):

> . . . the number of legally transported pupils per square mile during the next preceding year was:

DENSITY FIGURE	PER CAPITA ALLOWANCE	DENSITY FIGURE	PER CAPITA ALLOWANCE
.3000-.3083	$167.00	0.9334-0.9599	$99.00
.3084-.3249	165.00	0.9600-0.9866	97.00
.3250-.3416	163.00	0.9867-1.1071	95.00
.3417-.3583	161.00	1.1072-1.3214	92.00
.3584-.3749	158.00	1.3215-1.5357	90.00
.3750-.3916	156.00	1.5358-1.7499	88.00
.3917-.4083	154.00	1.7500-1.9642	86.00
.4084-.4249	152.00	1.9643-2.1785	84.00
.4250-.4416	150.00	2.1786-2.3928	81.00
.4417-.4583	147.00	2.3929-2.6249	79.00
.4584-.4749	145.00	2.6250-2.8749	77.00
.4750-.4916	143.00	2.8750-3.1249	75.00
.4917-.5083	141.00	3.1250-3.3749	73.00
.5084-.5249	139.00	3.3750-3.6666	70.00
.5250-.5416	136.00	3.6667-3.9999	68.00
.5417-.5583	134.00	4.0000-4.3333	66.00
.5584-.5749	132.00	4.3334-4.6666	64.00
.5750-.5916	130.00	4.6667-4.9999	62.00
.5917-.6133	128.00	5.0000-5.5000	59.00
.6134-.6399	125.00	5.5001-6.0000	57.00
.6400-.6666	123.00	6.0001-6.5000	55.00
.6667-.6933	121.00	6.5001-7.0000	53.00
.6934-.7199	119.00	7.0001-7.3333	51.00
.7200-.7466	117.00	7.3334-7.6667	48.00
.7467-.7733	114.00	7.6668-8.0000	46.00
.7734-.7999	112.00	8.0001-8.3333	44.00
.8000-.8266	110.00	8.3334-8.6667	42.00
.8267-.8533	108.00	8.6668-9.0000	40.00
.8534-.8799	106.00	9.0001-9.3333	37.00
.8800-.9066	103.00	9.3334-9.6667	35.00
.9067-.9333	101.00	9.6668-or more	33.00

The definition of Transportation Allowance employs the current Oklahoma distribution scale which is based on the number of legally transported pupils per square mile. It allows each district which must provide pupil transportation the amount that transportation should have cost, when compared to all other districts in the State. That is, the

allowance for each district is based on the ratio of actual statewide transportation costs to statewide transportation allowances for the previous year.

Pierce, Garms, Guthrie, and Kirst (40, p. 90) indicated that "the state should pay all transportation costs above some minimum level" in order to improve equal educational opportunity. The Fleischmann Commission (45) went further with its recommendation that the state pay one-hundred percent (100%) of transportation costs. Therefore, the Transportation Allowance is an equitable allowance since, theoretically, it covers all transportation costs.

Special Education Allowance

NEFP (19) data indicate that approximately eight percent (8%) of the total school population will require special education programs to assist in overcoming mental and physical handicaps.

Any state aid plan must deal with the problems of educating all students, including those exceptional students who require special services, usually at extra cost to school districts.

Pierce, Garms, Guthrie, and Kirst (40) identified exceptional children as:

> . . . those who differ from the average child in mental, sensory, physical, social, emotional, or communication abilities to such an extent that they require special educational services in order to develop to their maximum capacity (p. 72).

Johns and Morphet (25) stated:

> In analyzing the distribution of pupils who require educational programs with different costs, NEFP research data indicate that such pupils are not distributed uniformly among school districts, with a resulting higher incidence of high cost pupils in one district than in another. This latter finding adds further evidence to support the incorporation of cost differentials by the weighted pupil or adjusted instruction unit approach into state support programs (pp. 73-74).

This lack of uniform distribution of special education students is prevalent in Oklahoma. Districts which are similar in many respects often vary considerably in their special education offerings. For example, there are two Oklahoma school districts, both in the same county and similar in size, one of which supports eight (8) special education units while the other supports only two (2) units.

Also, according to Johns and Alexander (20), NEFP data indicate that:

> Education for the handicapped plus <u>extra</u> funding may be equal to the basic education provided for all children. Thus, special education programs tend to be more equal as the <u>cost differential</u> is added (p. 26).

Therefore, The Proposed Equalization Formula will respond to the needs of special education students because they are not uniformly distributed among school districts, and because they require special services. This also conforms to the Berke and Goettel (41) guidelines since special education fits the second guideline which recommends special financial assistance for the area. The Proposed Formula will make special allowances for all Oklahoma school districts offering programs approved by the State Department of Education

for exceptional children. Thus, unequal amounts of revenues per pupil will be advocated in order to improve equality of educational opportunity among students differing in need.

The allowance for each district, in the area of special education is defined as follows:

Special Education Allowance = (3/4) x (ATS) x (NAP), where ATS denotes the average salary for Oklahoma school teachers, and NAP denotes the number of state-approved special education programs in the district.

This formula allows for 3/4 of the average cost of the teacher's salary for each special education class. The rationale for funding only 3/4 of the teacher's salary is based on data pertaining to class size. In particular, during the 1977-78 school year there were 2,423 special education programs approved by the State Department of Education. These programs served a full-time equivalence of 18,723 students. Hence, the average special education class size was 7.7 which is approximately 1/4 of the average class size of regular classes. Therefore, the local district should be responsible for only one-fourth (1/4) of the teacher's salary.

This Special Education Allowance allows extra funding for exceptional students so that every student may have the opportunity for the type and quality of education that will best meet his needs as an individual and as a member of the society in which he lives. Furthermore, the Special Education Allowance is recognized before the leveling up process

is initiated in order to avoid inequities among districts in their instructional programs.

Sparsity Allowance

Sparsity of population is generally recognized as a special handicap for school districts, and consequently, a handicap for students within those districts. Burke (5, p. 128) wrote that "a pupil in a sparsely settled area is not the same as a pupil in a densely settled area." Jarvis, Gentry, and Stephens (17) reported the following:

> Research findings seem to indicate that student achievement as a whole is not as good in small schools as it is in larger schools (p. 145).
>
> Per pupil cost is directly related to size of enrollment. As the size of a school increases, the per capita cost decreases, at least up to a certain point (p. 152).

Burke (5, p. 129) wrote "Sparsity of population, no matter what the type of district structure, increases the per pupil expenditure for public schools." According to Jones (26):

> Some states recognize that thinly settled rural areas have unique problems . . . Advanced high school classes in mathematics, languages, and the sciences are likely to have few pupils in them, but they need to be offered if able rural students are to have educational opportunities available to them. Such an adjustment for rural communities in the state aid formula is called a sparsity correction (p. 42).

A sparsity correction will be employed by The Proposed Equalization Formula because Oklahoma, as a rural state, has a high percentage of small schools. In fact, during the 1977-1978 school year, seventy-two percent (72%) of all

Oklahoma school districts reported less than six hundred (600) students in average daily attendance.

The Sparsity Allowance is calculated according to the following scale:

$100	per	ADA	if	$0 < ADA \leq 200$
$ 50	per	ADA	if	$200 < ADA \leq 400$
$ 25	per	ADA	if	$400 < ADA \leq 600$

This allowance is applied prior to the leveling up process and is based on the assumption that sparsely populated districts have higher than average educational costs and therefore, deserve extra state support. It is intentionally minimal in order to avoid perpetuation of small districts which, according to Johns and Morphet (25), can hardly be justified under any conditions. Also, the Sparsity Allowance is meager in order to encourage reorganization of small, inadequate districts.

The Sparsity Allowance is also based on the findings of Jarvis, Gentry, and Stephens (17) who stated:

> There is rapid decrease in per capita cost for up to 200 students per school, slower, but continued decrease from 200 to 700, and stabilization from 700 to 3,000 students (p. 152).

That is, the smallest schools have the greatest deficiencies in per capita revenues. This accounts for the fact that the Sparsity Allowance per ADA is inversely proportional to the ADA.

Categorical programs play an integral role in satisfying financial requirements that result from various special

needs among school districts. Even so, they must be held to a minimum so that they respond only to those special needs that cannot be met otherwise. Johns and Morphet (25) wrote:

> . . . categorical aids, if extended indefinitely, could result in a situation approaching chaos (p. 354).
>
> . . . special purpose, or categorical grants often have served useful purposes, but they easily can get out of hand and prevent the development of a balanced educational program (p. 354).

Cohn (6) stated:

> All other things being equal, it appears, then, that the larger the relative amount of state funds and the fewer the number of categorical programs, the more equalizing the total finance program will be (p. 46).

In summary, The Proposed Equalization Formula will recognize only three special allowances. The particular areas of need are: Transportation, Special Education, and Sparsity. The resultant distribution program will focus on the total mix of categorical allowances and general aid.

Description Of The Proposed Equalization Formula

The Proposed Equalization Formula is designed for application among the 622 school districts in the State of Oklahoma. Its primary objective is to provide a vehicle for moving toward equalization of educational opportunities through a leveling up process among the Oklahoma school districts.

The Proposed Formula is based on the premise that no

school district will receive less state aid in the year in which the formula is applied than in the preceding year. Furthermore, the formula applies only to NEW FUNDS, that is, funds in excess of the total state aid allocations for the preceding year. These NEW FUNDS will be provided by the legislature.

Application of The Proposed Formula depends upon a ranking of the school districts according to their adjusted revenues per average daily attendance.

Adjusted Revenue Per Average Daily Attendance, which will be denoted by AR/ADA, is defined as follows:

$$\text{AR/ADA} = (X - Y)/(\text{ADA}),$$

where X = (Local Revenue) + (Miscellaneous & Dedicated Revenues) + (State Aid Revenue) + (Tax Penalty),

and Y = (Transportation Allowance) + (Special Education Allowance) + (Sparsity Allowance),

and ADA denotes Average Daily Attendance. All data are based on the year preceding the year of application of The Proposed Equalization Formula.

Local Revenue, Miscellaneous and Dedicated Revenues, and State Aid Revenue are currently allocated to the school districts in Oklahoma. The particular values to be used in the formula for AR/ADA are listed in the Annual Report (11). Tax Penalty, which relies on local support ability, was defined in the second section of this chapter.

The sum of Local Revenue, Miscellaneous and Dedicated Revenues, and State Aid Revenue is the total revenue that

the school district received during the preceding year. Thus, the term X, in the formula for AR/ADA, represents the total revenue that the school district would have received had it properly met its tax obligations.

The formula for AR/ADA recognizes special needs in the areas of transportation, special education, and district sparsity, which vary among school districts. For this reason, AR/ADA is based on all potentially available revenue remaining after allowing for these special needs. These three allowances were defined in the preceding section of this chapter.

The Proposed Equalization Formula will be presented in the next section. It will equalize AR/ADA values for the maximum number of school districts as determined by the amount of NEW FUNDS available. Theoretically, its repeated application, year after year, will result in the eventual equalization of AR/ADA values among all school districts in the State of Oklahoma. Also, no district will ever receive less state aid during a particular year than during the preceding year. As indicated above, during the third year of application of The Proposed Formula, the uniform tax assessment ratio will comply with the present average assessment ratio of 12%, as specified by Oklahoma State Law. The formula will also allow for special needs in the areas of Transportation, Special Education, and Sparsity of District.

The result of The Proposed Formula will be greater equalization of tax burdens. It will also facilitate a

movement toward equalization of educational opportunities by meeting special needs of students.

Statement Of The Proposed Equalization Formula

The Proposed Equalization Formula is based on the ranking of all Oklahoma school districts according to their adjusted revenues per average daily attendance. The AR/ADA was defined in the preceding section and must be calculated for each school district in the State. The ranking of the districts is simply the numerical arrangement of the school districts according to their AR/ADA values. This ranking will be referred to as the AR/ADA RANKING. Also, all data used in the determination of the AR/ADA RANKING applies to the school year preceding the year in which The Proposed Equalization Formula is to be applied.

For notational purposes, r_i denotes the AR/ADA for the i-th district (from the lowest) in the AR/ADA RANKING. In particular, r_1 denotes the AR/ADA for the school district with lowest AR/ADA. Thus,

$$r_1 \leq r_2 \leq \ldots \leq r_i \leq r_{i+1} \leq \ldots \leq r_{622}.$$

The symbol, a_i, denotes the average daily attendance for the i-th district (from the lowest) in the AR/ADA RANKING.

The Proposed Equalization Formula will distribute the NEW FUNDS among the districts with lowest AR/ADA values. In

particular, it will raise the AR/ADA value of the first district (the lowest in the RANKING) to the same level as the AR/ADA value of the second district, and then raise the AR/ADA values of both of those districts to the AR/ADA value of the third district, and raise the AR/ADA values of all three of those districts to the AR/ADA value of the fourth district, etc. Thus,

$$a_1(r_2 - r_1)$$

denotes the total revenue required to raise the AR/ADA value of the first district to the same AR/ADA as the second district in the RANKING, and

$$a_1(r_2 - r_1) + (a_1 + a_2)(r_3 - r_2)$$

denotes the total revenue required to raise the AR/ADA values of those two districts to the same AR/ADA value as the third district in the RANKING. In general,

$$a_1(r_2 - r_1) + (a_1 + a_2)(r_3 - r_2) + (a_1 + a_2 + a_3)(r_4 - r_3) + \ldots + (a_1 + a_2 + \ldots + a_{k-1})(r_k - r_{k-1})$$

denotes the total revenue required to raise the AR/ADA values of the (k - 1) lowest districts to the same AR/ADA as the k-th district in the RANKING. The preceding sum may be expressed symbolically as:

$$\sum_{i=1}^{k-1} (a_1 + \ldots + a_i)(r_{i+1} - r_i).$$

There is a fixed amount of revenue classified as NEW FUNDS for the year of application of The Proposed Equalization Formula. This total amount of NEW FUNDS is denoted by

the symbol, N, and determines the number of districts which will receive allocations of NEW FUNDS.

The number of districts to receive allocations of NEW FUNDS is determined by selecting the greatest integer, k, such that

$$\sum_{i=1}^{k-1} (a_1 + \ldots + a_i)(r_{i+1} - r_i) \leq N.$$

This particular integer is denoted by the symbol, n. Consequently, n is determined by N, and for the year of application of The Proposed Formula, both N and n are constants. Because of the method of its selection, n is the greatest integer such that

$$\sum_{i=1}^{n-1} (a_1 + \ldots + a_i)(r_{i+1} - r_i) \leq N.$$

Furthermore, this particular integer, n, indicates the level to which the AR/ADA values of the (n - 1) lowest districts will be raised when the NEW FUNDS are distributed according to The Proposed Equalization Formula. That is, each district which has AR/ADA less than r_n will receive an appropriate allocation of NEW FUNDS in order to raise its AR/ADA to the value r_n.

The NEW FUNDS will be distributed among the (n - 1) lowest districts in the AR/ADA RANKING as follows: The first (lowest) district will receive an allocation of NEW Funds in the amount of

$$a_1\left[(r_2 - r_1) + (r_3 - r_2) + \ldots + (r_n - r_{n-1})\right] =$$

$$a_1(r_n - r_1).$$

The second (next to lowest) district will receive an allocation of NEW FUNDS in the amount of

$$a_2\left[(r_3 - r_2) + (r_4 - r_3) + \ldots + (r_n - r_{n-1})\right] = a_2(r_n - r_2).$$

In general, if $1 \leq k \leq (n - 1)$, then the k-th district in the AR/ADA RANKING will receive an allocation of NEW FUNDS in the amount of

$$a_k\left[(r_{k+1} - r_k) + \ldots + (r_n - r_{n-1})\right] = a_k(r_n - r_k).$$

If the total amount of NEW FUNDS allocated to the lowest $(n - 1)$ districts is strictly less than N, that is, if

$$\sum_{i=1}^{n-1} (a_1 + \ldots + a_i)(r_{i+1} - r_i) < N,$$

then the excess funds in the amount of

$$N - \left[\sum_{i=1}^{n-1} (a_1 + \ldots + a_i)(r_{i+1} - r_i)\right]$$

will be distributed among the first n districts in order to maintain the equality of their AR/ADA values. In particular, if $1 \leq k \leq n$, then the k-th district will receive additional NEW FUNDS in the amount of

$$a_k\left[\frac{N - \sum_{i=1}^{n-1} (a_1 + \ldots + a_i)(r_{i+1} - r_i)}{\sum_{i=1}^{n} a_i}\right].$$

Finally, The Proposed Equalization Formula results in the distribution of all NEW FUNDS in order to equalize the adjusted revenues per ADA of the first n districts as listed

in the AR/ADA RANKING. It is most briefly stated below.

Brief Statement Of The Proposed Formula

1. Calculate AR/ADA for each school district.

2. Rank all districts, according to their AR/ADA values, so that

$$r_1 \leq r_2 \leq \ldots \leq r_{622}.$$

3. Select the greatest integer, n, such that

$$\sum_{i=1}^{n-1} (a_1 + \ldots + a_i)(r_{i+1} - r_i) \leq N,$$

where N denotes the total amount of NEW FUNDS.

4. If $1 \leq k \leq (n - 1)$, then the k-th district in the AR/ADA RANKING will receive an allocation of NEW FUNDS in the amount of

$$a_k(r_n - r_k).$$

5. If the total amount of NEW FUNDS allocated to the lowest (n - 1) districts is strictly less than N, then the excess funds will be distributed among the first n districts in order to maintain the equality of their AR/ADA values.

CHAPTER IV

APPLICATION OF THE PROPOSED EQUALIZATION FORMULA

This chapter presents an actual application of The Proposed Equalization Formula as defined in Chapter III. This application is based on the AR/ADA values for 1977-78 and the actual amount of NEW FUNDS allocated by the Oklahoma Legislature for the 1978-79 school year. Hence, it determines the distribution of funds to the 622 Oklahoma school districts for the 1978-79 school year. This application also determines the number of districts that would be leveled up by application of the formula to the 1978-79 NEW FUNDS.

The notation defined in Chapter III is used throughout the present chapter.

1978-79 Application

The present section is based on the hypothesis that The Proposed Equalization Formula will be used to determine the distribution of funds to Oklahoma public schools for the 1978-79 school year.

According to Chapter III, the first step in the application of The Proposed Formula is the calculation of AR/ADA

for each Oklahoma school district. For example, the formula for AR/ADA presented in Chapter III applies to the Boswell school district as follows:

$$AR/ADA = (X - Y)/(ADA),$$

where X = (Local Revenue) + (Miscellaneous & Dedicated Revenues) + (State Aid Revenue) + (Tax Penalty),

and Y = (Transportation Allowance) + (Special Education Allowance) + (Sparsity Allowance),

and ADA denotes Average Daily Attendance.

The 1977-78 Annual Report (11) presents the necessary data for each school district. In particular, for the Boswell district,

Local Revenue = $138,938.00

Miscellaneous & Dedicated Revenues = $ 51,165.00

State Aid Revenue = $362,896.00

Tax Penalty = $ 18,255.00

Transportation Allowance = $ 61,135.00

Special Education Allowance = $ 18,000.00

Sparsity Allowance = $ 10,925.00

Average Daily Attendance = 437

Therefore,

$$X = (138,938) + (51,165) + (362,896) + (18,255) = 571,254$$

and

$$Y = (61,135) + (18,000) + (10,925) = 90,060.$$

Consequently,

$$AR/ADA = (571,254 - 90,060)/(437) = 1101.$$

The second step in the application of The Proposed Formula is the ranking of all districts, according to their AR/ADA values. The AR/ADA RANKING for the 1978-79 application is located in the Appendix. This ranking is based on 1977-78 data. The Appendix also includes, for each i, the total amount, T_i, of NEW FUNDS required to level up the i lowest districts to the level (i + 1).

For convenience, a small section of the Appendix is listed below as Table I, and will be referred to in this application. This segment of the Appendix includes the 431-st district, namely Boswell, for which the AR/ADA is 1101, as calculated in the preceding example.

TABLE I

A SEGMENT OF THE APPENDIX

i	District Name	a_i	r_i	T_i
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
434	Bethany	791	1104	45,420,443
433	Burns Flat	542	1104	45,069,445
432	Woodward	2654	1102	45,069,445
431	Boswell	437	1101	44,370,115
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.

The Oklahoma Legislature allocated NEW FUNDS in the amount of $44,668,669 for the 1978-79 school year. Hence,

$N = 44,668,669.$

The third step in the application of The Proposed Formula is the selection of the greatest integer, n, such that

$$\sum_{i=1}^{n-1} (a_1 + \ldots + a_i)(r_{i+1} - r_i) \leq N.$$

According to Table I,

$$\sum_{i=1}^{432-1} (a_1 + \ldots + a_i)(r_{i+1} - r_i) = 44,370,115 \text{ and}$$

$$\sum_{i=1}^{433-1} (a_1 + \ldots + a_i)(r_{i+1} - r_i) = 45,069,445.$$ Hence,

$n = 432$ and $r_n = r_{432} = 1102$. Consequently, the amount of NEW FUNDS allocated for the 1978-79 school year is greater than the amount required for the equalization of the 432 districts with least AR/ADA values. A total of $44,370,115 in NEW FUNDS is required in order to level-up the 431 lowest districts to the level 432. This amount will result in an AR/ADA value of 1102 for each of the first 432 districts.

The fourth step in the application of The Proposed Formula is the allocation of that portion of the NEW FUNDS required to equalize the AR/ADA values of these 432 districts. As indicated in Chapter III, if $1 \leq i \leq n-1 = 431$, then the i-th district in the AR/ADA RANKING will receive an allocation of NEW FUNDS in the amount of

$$a_i(r_n - r_i) = a_i(1102 - r_i).$$

For example, the Piedmont Public School District has

$$i = 353,\ a_i = a_{353} = 658,\ \text{and}\ r_i = r_{353} = 1024.$$

According to the preceding formula, the Piedmont district would receive an allocation of NEW FUNDS in the amount of $51,324.00 since

$$a_{353}(1102 - r_{353}) = 658(1102 - 1024) = 51,324.$$

In the present application of The Proposed Equalization Formula, N = 44,668,669 and the total amount of NEW FUNDS allocated to the 431, that is, (n - 1), districts with the lowest AR/ADA values is $44,370,115 which leaves excess funds in the amount of $298,554.

The fifth and final step of this application is the distribution of these excess funds among the first n = 432 districts. According to The Proposed Equalization Formula, the excess funds are distributed among these districts in order to maintain the equality of their AR/ADA values. Thus, each of the 432 districts will receive excess funds in the amount of

$$\frac{N - \sum_{i=1}^{431} (a_1 + \ldots + a_i)(r_{i+1} - r_i)}{\sum_{i=1}^{432} a_i} = \frac{298,554}{349,665} = .8538$$

dollars per ADA. In particular, the Piedmont district, with ADA = a_{353} = 658, would receive additional NEW FUNDS in the amount of (.8538)(658) = 561.80. Therefore, the total allocation of NEW FUNDS to the Piedmont district for the 1978-79 school year would be $51,324.00 + $561.80 = $51,885.80.

Finally, this 1978-79 application of The Proposed Equalization Formula allows the equalization of the AR/ADA values of the lowest 432 districts in the AR/ADA RANKING to the level 1102.8538.

Future Application

According to the AR/ADA RANKING for the 1978-79 application, 44 million dollars would level up 432 school districts. An additional 60 million dollars would level up a total of 480 districts. A total of 2,373 million dollars in NEW FUNDS would be required to level up all 622 school districts in 1978-79.

The formula applied in this chapter is applicable to any subsequent school year. It depends on the following information for the year of application: ADA for each school district, AR/ADA RANKING, and the amount of NEW FUNDS.

CHAPTER V

EVALUATION OF THE PROPOSED EQUALIZATION FORMULA

The major purpose of the present chapter is to measure the extent to which The Proposed Equalization Formula utilizes the financial resources available to equalize educational opportunities among Oklahoma school students. The chapter includes a description of the 1978-79 Oklahoma distribution program, an evaluation of that program, an evaluation of the distribution program resulting from application of The Proposed Equalization Formula in Oklahoma, and a comparison of the results.

Instead of attempting a new analysis with a limited data base, this chapter relies on a study of equalization impact undertaken, during the past decade, by the National Educational Finance Project (NEFP). Research findings reported by the National Educational Finance Project are employed in this chapter.

As stressed in Chapter I, there are many factors, tangible and intangible, which affect the formal education of a child. However, the NEFP made the fundamental assumption that equality of resources is the necessary and reasonable starting point toward equality of educational opportunities

for all children. As a result of this assumption, the NEFP focused its attention on the provision of the financial resources necessary to provide adequate educational opportunities for all public school students in the nation. The NEFP (23) used the following definition:

> Financial equalization is most nearly accomplished when the following two factors are met: (1) the varying educational needs of the student population are taken into consideration before the allocations are made, and (2) the variation of the ability of the local school districts to support education is reduced or eliminated through the utilization of state resources (p. 120).

According to Johns, Alexander, and Stollar (23), the National Educational Finance Project studied the financial equalization of educational opportunity of public school finance programs for the following reasons:

> First, to determine the extent to which financial equalization is achieved in each state; second, to provide a historical bench mark from which educational finance programs in the future can be evaluated with respect to progress made; and third, to provide a method by which alternative school finance models may be evaluated with respect to financial equalization of educational opportunity (p. 124).

A new typology for the classification of school funds was developed for the NEFP. That typology, called the NEFP Typology, will be used to evaluate both the 1978-79 Oklahoma distribution program and the distribution program resulting from application of The Proposed Formula in Oklahoma.

The Evaluation Instrument

The evaluations presented in this chapter rely solely

on the National Educational Finance Project Typology. That Typology is stated below as presented by Johns, Alexander, and Stollar (23):

> The NEFP Typology is based on the following assumptions.
>
> 1. That local school funds provide no financial equalization unless local variations in taxpaying ability are taken into consideration in the state's apportionment formula.
>
> 2. Assuming that a given amount of state revenue is apportioned by the districts of a state:
>
> a. No equalization is obtained if state dollars are required to be matched dollar per dollar from local funds.
>
> b. The first level of equalization is reached when state funds are allocated in the form of uniform flat grants per teacher or per pupil without taking into consideration necessary variations in unit costs and without taking into consideration variations in local taxpaying ability.
>
> c. The second level of equalization is reached when state funds are allocated in the form of flat grants which take into consideration necessary unit cost variations but which do not take into consideration variations in local taxpaying ability.
>
> d. The third level of equalization is reached when state funds are allocated in the form of uniform flat grants without taking into consideration necessary unit cost variations but which take into consideration variations in local taxpaying ability.
>
> e. The fourth and highest level of equalization is obtained from a given amount of a state revenue when it is allocated in such a manner as to take into consideration necessary variations in unit costs, and also variations in the taxpaying ability of local school districts.
>
> Briefly, the NEFP Typology classifies local and state funds into five levels of financial equalization: the levels range from Level 0 to Level 4.

State funds are classified into the following five levels according to the criteria established below:

1. Level 0 of Equalization: When state funds are allocated in such a manner as to leave districts with the same or greater differences in financial capacity to support education as they were before receiving state allocations they are classified in Level 0. A method of state distribution which is classified as Level 0 is a minimum guarantee of funds to certain wealthy districts which are not entitled to receive state funds under strict interpretation of the equalization formula. Also, if districts were not entitled to receive as much under the equalization formula as they received under a minimum guarantee, the difference between what they should have received under the equalization formula and the minimum guarantee amount is classified as Level 0. The remaining amount that the districts were entitled to under the equalization formula is classified as either Level 3 or Level 4 described below, depending on whether educational needs are taken into consideration. The allocations in dollar-for-dollar matching grants, without regard for differences in taxpaying ability of the districts, provide for no equalization and are also classified in the zero level of equalization.

2. Level 1 of Equalization: When state funds are allocated on the basis of a flat amount per unweighted pupil or unadjusted classroom unit basis, or some other method which ignores unit cost variations in meeting the educational needs of the students, and a required local share in proportion to the taxpaying ability of the local districts is not deducted before the apportionment is made, the funds are classified in Level 1.

3. Level 2 of Equalization: When state funds are allocated on a weighted unit basis or some other method that recognizes unit cost variations in meeting the educational needs of the students and a required local share in proportion to the taxpaying ability of the local district is not deducted before the apportionment is made the funds are classified in Level 2 of equalization.

4. Level 3 of Equalization: State funds are classified in Level 3 when they are allocated on the basis of unweighted pupils or some other method that ignores necessary variations in unit

costs, but a required local share in proportion to the taxpaying ability of the local districts is deducted before the apportionment is made.

5. Level 4 of Equalization: When state funds are allocated on a weighted pupil basis or some other method that recognizes unit cost variations in meeting the educational needs of the students and a required local share in proportion to the taxpaying ability of the local districts is deducted before the apportionment is made, they are classified in Level 4 of equalization.

It will be noted that the NEFP Typology is a continuum ranging from Level 0, which provides no equalization, to the highest level of equalization which is Level 4 (pp. 124-127).

The scoring method developed by the National Educational Finance Project will be utilized in the present chapter. That scoring method was explained by Johns, Alexander, and Stollar (23):

1. Level 0 funds are assigned a score of 1 in order that other levels may be made proportional to it.

2. Level 1 funds have at least 5 times the equalization value of the equalization Level 0 funds. As Level 1 funds approach 100 percent of total state and local funds, the equalization value of Level 1 funds approaches the value of Level 3 funds. Therefore, the equalization value of Level 1 funds should be computed as follows:
5 + (.02)(the percent of total state and local funds in Level 1).

3. Level 2 funds have at least 20 percent more equalization value than Level 1 funds. However, as Level 2 funds approach 100 percent of state and local funds, the equalization value of Level 2 funds approaches the value of Level 4 funds which have the maximum equalization value. Therefore, the equalization value of Level 2 funds should be computed as follows:
6 + (.024)(the percent of total state and local funds in Level 2).

4. As indicated above, Level 3 funds are assigned an equalization value of 7.

5. Level 4 funds are assigned the maximum equalization value of 8.4 which is 20 percent higher than Level 3 funds (pp. 135-136).

Johns, Alexander, and Stollar (32) provided instructions for applying the National Educational Finance Project Typology. They also included examples of its application to various finance programs and appropriate format and notation. This information is used in the evaluations provided in the present chapter.

The 1977-1978 and 1978-1979 Oklahoma Distribution Programs

The Oklahoma distribution program is revised each year. The Oklahoma Legislature, on an annual basis, approves a new program for the distribution of State educational funds among the public schools of Oklahoma. The 1977-1978 program was enacted into law through House Bill 1001 and the 1978-1979 program was enacted into law through Senate Bill 454. These two programs are summarized in Table II. That table also presents the totals of allocations for each of the two school years. In particular, the allocations for 1977-1978 totaled $321,951,961.00 and these allocations were increased by $44,668,669.00 in 1978-1979. Hence, the allocations for 1978-1979 totaled $366,620,630.00. Finally, in the notation of this study, the NEW FUNDS totaled $44,668,669.00 for the 1978-1979 school year.

TABLE II

OKLAHOMA DISTRIBUTION PROGRAMS
FOR 1977-1978 (H.B.1001) AND
1978-1979 (S.B.454)

Program Area	77-78(H.B.1001)	78-79(S.B.454)
Foundation Aid	$ 41,304,727	$ 37,761,095
Flat Grants		
Trans. & Spec. Educ.	28,322,181	30,747,925
Voc. Educ.	3,837,780	5,875,480
Incentive Aid	102,267,827	109,864,735
Min. Revenue Guarantee	4,210,000	4,360,000
Allocation Guarantee	350,000	250,000
Purchase of Textbooks	6,000,000	6,000,000
New Spec. Ed. & Gifted & Talented	1,600,000	2,260,000
Homebound Education	800,000	800,000
Prescriptive Teaching Centers	3,050,000	3,590,000
Ele. Counseling	1,600,000	1,720,000
School Lunch Matching	1,663,585	1,524,254
Previous Years' Salary Increases	93,511,576	126,761,576
County Superintendents' Salaries	184,285	209,285
Salary Increases	33,250,000	33,415,280
Library Media Improvement		300,000
Adjustment, FY-78 Teacher Salary Increase		1,181,000
TOTALS	$321,951,961	$366,620,630

Evaluation Of The 1978-1979 Oklahoma Distribution Program

The present section applies the NEFP Typology to the 1978-1979 Oklahoma distribution program. The format used in this section is similar to that suggested by Johns, Alexander, and Stollar (23).

Data required for the present application of the NEFP Typology are summarized in Table III.

TABLE III

PERCENTAGES OF 1978-79 STATE FUNDS AT EACH NEFP EQUALIZATION LEVEL

State Funds	Level 0	Level 1	Level 2	Level 3	Level 4
Foundation Aid				x	
Trans & Spec Ed			x		
Vocational Aid		x			
Incentive Aid	x				
Min Rev Guarantee				x	
Allocation Guarantee	x				
Purchase of Textbooks			x		
New Spec Ed & Gift & Talent			x		
Homebound Education			x		
Prescriptive Teach Centers		x			
Elementary Counseling			x		
School Lunch Matching	x				
Previous Yrs' Salary Incr		x			
County Supts' Salaries		x			
Salary Increases, FY-79		x			
Library Media Improvement		x			
Salary Increases, FY-78		x			
Percentage Each Level	30.42	46.74	11.35	11.49	

The NEFP Equalization Score for the 1978-1979 Program is based on the preceding table and is calculated according to the instructions presented in the first section of this chapter.

NEFP Equalization Score for the 1978-79 Distribution Program = $1(.3042) + (5 + .02(46.74))(.4674)$
$+ (6 + .024(11.35))(.1135)$
$+ 7(.1149)$
$= 4.594$

Evaluation Of The Proposed Distribution Program

The distribution program resulting from application of The Proposed Equalization Formula for the 1978-1979 school year is evaluated in this section. This program assumes the 1977-1978 Oklahoma distribution program as presented in Table II, and then allocates the NEW FUNDS in the amount of $44,668,669.00 as prescribed by The Proposed Formula. The program is summarized in Table IV and its evaluation is based on the data displayed in Table V.

NEFP Equalization Score for the distribution program resulting from application of The Proposed Equalization Formula = $1(.2843) + (5 + .02(36.51))(.3651)$
$+ (6 + .024(10.47))(.1047)$
$+ 7(.1241) + 8.4(.1218)$
$= 4.923$

TABLE IV

THE 1978-79 DISTRIBUTION PROGRAM RESULTING FROM APPLICATION OF THE PROPOSED EQUALIZATION FORMULA

Program Area	Allocation
Foundation Aid	$ 41,304,727
Flat Grants	
Transportation & Special Education	28,322,181
Vocational Education	3,837,780
Incentive Aid	102,267,827
Minimum Revenue Guarantee	4,210,000
Allocation Guarantee	350,000
Purchase of Textbooks	6,000,000
New Special Ed & Gifted & Talented	1,600,000
Homebound Education	800,000
Prescriptive Teaching Centers	3,050,000
Elementary Counseling	1,600,000
School Lunch Matching	1,663,585
Previous Years' Salary Increases	93,511,576
County Superintendents' Salaries	184,285
Salary Increases, FY-78	33,250,000
NEW FUNDS	44,668,669
TOTAL	$366,620,630

TABLE V

PERCENTAGES OF 1978-79 STATE FUNDS AT EACH NEFP EQUALIZATION LEVEL, ASSUMING APPLICATION OF THE PROPOSED FORMULA

State Funds	Level 0	Level 1	Level 2	Level 3	Level 4
Foundation Aid				x	
Trans & Spec Ed			x		
Vocational Ed		x			
Incentive Aid	x				
Min Rev Guarantee				x	
Allocation Guarantee	x				
Purchase of Textbooks			x		
New Spec Ed, etc.			x		
Homebound Education			x		
Prescriptive Teach Centers		x			
Elementary Counseling			x		
School Lunch Matching	x				
Previous Yrs' Salary Incr		x			
County Supts' Salaries		x			
Salary Increases, FY-78		x			
NEW FUNDS					x
Percentage Each Level	28.43	36.51	10.47	12.41	12.18

Evaluation Results

The NEFP Typology measures the extent that state funds are used to equalize the financial resources available for education. The highest possible score is 8.4 and the lowest possible score is 1.0.

According to the evaluations presented in this chapter, the 1978-79 distribution program results in an equalization score of 4.594 for Oklahoma, and The Proposed Equalization

Formula results in a score of 4.923. Thus, the distribution program resulting from application of The Proposed Equalization Formula ranks higher with respect to equal educational opportunity than does the current Oklahoma program.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The concept of equalization of educational opportunity is and has long been an important goal of American public school education. There is little doubt that the equalization concept is basic to American culture. Despite the attention that has been focused on equalization of educational opportunity, there is no general agreement on a precise definition of the concept. However, educators do agree that equalization of educational opportunity has not been achieved by the American system of free public education. Cyr, Burke, and Mort (9) recognized this fact and wrote:

> Children living on different sides of a highway may walk down that same highway to schools, but to very different schools. The district on one side may still be taxing real estate at a high rate to support a poor school; the district on the other side may be taxing a power plant or canning factory or railroad at a low rate to support a very good school (p. 32).

During the past century, educators and finance experts have been frustrated by the failure of public education to achieve equality of educational opportunity. Their dilemma has been compounded by the fact that absolute equality of educational opportunities for all students is not possible

nor even desirable. It should be recognized that not all inequalities can be removed, nor should they be removed. In particular, Burke (5) wrote:

> Inequalities caused by the able, vigorous, and willing communities raising their standards and improving their programs constitute the most powerful force for improving educational opportunities in all school systems (p. 586).

Furthermore, students have different needs and require different types of educational opportunities in order to equalize their chances for obtaining educations commensurate with their needs. Even though it is not possible to equalize the many factors affecting the learning of students, it is possible to reduce the undesirable effects of these factors by planning the proper and intelligent use of the financial resources made available for public education. According to Garvue (14):

> Theoretically, all the children of the state are equally important and are entitled to have the same advantages; practically this can never be quite true. The duty of the state is to secure for all as high a minimum of good instruction as is possible but not to reduce all to this minimum; to equalize the advantages to all as nearly as can be done with the resources at hand; to place premium on those local efforts which will enable communities to rise above the legal minimum as far as possible; and to encourage communities to extend their educational energies to new and desirable undertakings (pp. 224-225).

Equality of educational opportunity is used today to rationalize many state school finance programs. However, the objective of state policy is not to equalize educational opportunities in a literal sense, but to improve educational opportunities for all students. According to Burke (5):

> The question becomes one of learning what is the range of educational opportunities within the state, discovering why some localities lag so far behind others, and devising means for lifting the communities at the lower end of the scale while at the same time fostering continued progress by communities at the upper end of the scale of ability and willingness (p. 565).

Morphet (28) indicated that equality of educational opportunity does not mean an identical education for all children, but the provision by state or local means of at least certain minimum essentials of financial support. And Morphet (28) wrote:

> Any defensible plan of financing public schools will enable the people of a state, and of each adequately organized district in the state, to provide essential educational opportunities and adequate programs for all at a reasonable and equitable cost to the taxpayers (p. 511).

These considerations imply that absolute equality of educational opportunities will never be attained in any state. Thus, a realistic goal for state school finance programs is the provision of sufficient revenues to bring all districts up to some level of expenditure that would, if properly administered, assure reasonably adequate educational opportunities.

Conclusions

The present study resulted in a precise definition of the concept of equalization of educational opportunities and the development, application, and evaluation of a new finance formula for the funding of Oklahoma public schools. The study included a compact history of the concept of

equalization of educational opportunity and a description of the concept. The following conclusions culminated from this study:

1. Complete attainment of equalization of educational opportunity is impossible.

2. Absolute equalization of educational opportunity is undesirable.

3. It is imperative, both legally and ethically, that states move toward equalization of educational opportunities.

The phrase, "move toward", is highly significant in the preceding statement. It is the principle on which this research was founded.

This study led to the implication that there is no "best" finance plan for the enhancement of equalization of educational opportunities. Therefore, any particular plan may be improved in this area. The concept was defined as follows:

> Equalization of Educational Opportunities is the reduction of inequalities in potentials for educational success among students and in tax burdens among localities.

The finance formula presented in this study was referred to as The Proposed Equalization Formula. It utilized the increased state revenue resulting from an inflationary economy to strengthen educational opportunities among students in Oklahoma public schools.

Application of The Proposed Equalization Formula depends on a ranking of the Oklahoma school districts according to their Adjusted Revenue values, per Average Daily

Attendance, that is, AR/ADA values. This AR/ADA value was designed to recognize special needs in the areas of transportation, special education, and district sparsity; and to levy a penalty on any district not conforming to the statewide equal tax assessment ratio. It was also based on current allocations of funds to Oklahoma public school districts.

Under The Proposed Equalization Formula, high-spending districts are frozen at their existing levels of state support. This technique was favored by the Fleischmann Commission. According to Benson (2):

> Though the Fleischmann Commission eschewed absolute cuts in expenditures in any district, their recommendation did imply cuts in the real value of services in high-spending districts. Accepting the fact that the economy is inflationary, to hold a group of districts at a constant dollar sum of expenditures means that the real value of school outlays per student in the high-spending districts must fall (p. 345).

An inflationary economy will generally result in more revenue each year than the preceding year. This extra revenue was classified as NEW FUNDS in this study.

The Proposed Equalization Formula was designed to distribute these NEW FUNDS among the poorest districts in the State. This distribution results in a leveling up of the poorest districts. The higher the rate of inflation, the more quickly the gaps among districts will be closed. Ironically, one of the few positive contributions inflation can make to our society is to facilitate the achievement of greater equity in education.

The present study included the application of The Proposed Equalization Formula to the 622 Oklahoma school districts for the 1978-1979 school year. As a result of this application, which was based on $44,668,669.00 in NEW FUNDS, 432 districts were leveled up. Application of The Proposed Equalization Formula in subsequent years would result in the eventual equalization of AR/ADA values among all Oklahoma school districts. This result approaches full state funding.

Finally, the present study included an evaluation of the distribution program resulting from The Proposed Equalization Formula and also an evaluation of the 1978-1979 Oklahoma distribution program. Both evaluations were based entirely on the National Educational Finance Project Typology.

Comparisons of the two evaluations led to the conclusion that the distribution program resulting from The Proposed Equalization Formula ranks higher in equalization of educational opportunities than does the present Oklahoma distribution program. Consequently, The Proposed Formula does strengthen equality of educational opportunity for students in Oklahoma Public Schools, when evaluated in light of criteria established by the NEFP.

Recommendations

Even though the distribution program resulting from The Proposed Equalization Formula ranks higher in the area of equalization of educational opportunities than does the

1978-1979 Oklahoma distribution program, it is not the "best" plan. As indicated earlier, absolute equality of educational opportunities is impossible. Therefore, any distribution program may be improved. The initial recommendation resulting from this study is the recommendation that The Proposed Formula may be modified in order to provide additional strengthening of equalization of educational opportunity for Oklahoma public school students. Particular areas for future consideration include:

1. Capital outlay
2. Adult education
3. Federal funding

The present study has also resulted in several general recommendations regarding school finance. Some of the significant recommendations are listed.

A State finance program for public education should:

1. Incorporate gradual change. (The public generally responds badly to sudden change.)

2. Be politically attractive. (No district should experience radical or abrupt decreases in revenues; disparities among districts should be minimal; etc.)

3. Be readily adaptable to change and modification. (Any plan may be improved.)

4. Be subjected to frequent review and modification. (There is no "best" plan.)

Inherent in each of these recommendations is the concept of change, a basic ingredient in any plan for the distribution of revenues for public education. Morrison (29)

gave an apt description of the task of monitoring and modifying a school finance program:

> . . . the state is not a chemical compound of which the districts are constituent elements, and the various indices which might be worked out for each district are not after the analogy of atomic-weights, electron systems, and the like. There is nothing like what the physical scientist knows as the fixed order of Nature present in the program (of funding education). Not only is a different order of thinking required, but a different kind of thinking as well. All the factors entering the problem shift in place and change in value as the economic and social circumstances of hundreds of local districts themselves shift and change (p. 203).

Morrison was stressing the fact that school finance is neither simple nor static.

The idea of continual change is implied by the present study. Thus, the quest for equality of educational opportunity is a never-ending and continual process.

States must continue to move toward equalization of educational opportunities by reducing inequalities in potentials for educational success among students and in tax burdens among localities.

Educators and finance experts must accept, seek, and support change. They cannot relax!

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APPENDIX

AR/ADA RANKING FOR THE 1978-79 APPLICATION OF THE PROPOSED FORMULA AND TOTAL AMOUNTS OF 1978-79 NEW FUNDS REQUIRED TO LEVEL-UP INDIVIDUAL DISTRICTS

i (RANK)	District Name	a_i (ADA)	r_i (AR/ADA)	T_i [1]
622	Garrett	53	5448	$2,373,501,638
621	Adams	57	4866	2,373,501,638
620	Optima	27	4670	2,056,668,404
619	Gate	34	4526	1,949,979,724
618	Straight	67	3796	1,871,600,092
617	Forgan	218	3478	1,474,283,722
616	Ideal	23	3335	1,301,227,486
615	Balko	189	3297	1,223,437,774
614	Progressive	55	3238	1,202,767,256
613	Hitchcock	57	3229	1,170,684,708
612	Mingo	173	3229	1,165,791,255
611	Yarbrough	150	3186	1,165,791,255
610	Milfay	65	3124	1,142,421,314
609	Plainview	41	3012	1,108,734,420
608	Weaver	43	2900	1,047,887,956

[1] $$T_i = \sum_{j=1}^{i} (a_1 + \ldots + a_j)(r_{j+1} - r_j).$$

This sum denotes the total amount of NEW FUNDS required to raise the AR/ADA values of the i lowest districts to the value r_{i+1}, as explained in Chapter III.

For example, for i = 607, T_i = $987,046,084, so that a total of $987,046,084 in NEW FUNDS is required to raise the AR/ADA values of the lowest 607 districts to the level $r_{608} = 2900$.

607	Burlington	191	2878	987,046,084
606	Taloga	247	2828	975,095,948
605	Lomega	150	2759	947,946,098
604	Leedey	205	2729	910,496,348
603	Cashion	277	2643	894,218,348
602	Sumner	37	2508	847,572,378
601	Bradley	42	2489	774,386,448
600	D. C. Lamont	130	2453	764,086,909
599	Reydon	130	2453	749,451,856
598	Buffalo	345	2447	744,575,692
597	Sweetwater	95	2434	741,325,696
596	Freedom	128	2425	734,288,523
595	Hardesty	140	2425	729,417,489
594	Custer	184	2408	729,417,489
593	Carmen	191	2383	720,221,203
592	Ames	169	2281	706,701,853
591	Turpin	382	2222	651,562,387
590	Seiling	439	2211	619,677,961
589	Wakita	219	2192	613,737,609
588	Konowa	661	2184	603,485,342
587	Waynoka	342	2177	599,170,350
586	Medford	332	2174	595,399,359
585	Vici	224	2173	593,784,246
584	Beaver	486	2157	593,246,207
583	Crawford	44	2152	584,641,167
582	Arnett	238	2150	581,954,522
581	Ringwood	280	2144	580,879,952

580	Banner	69	2126	577,657,670
579	Mooreland	420	2099	567,995,864
578	Union	30	2097	553,505,018
577	Jet-Nash	243	2091	552,432,462
576	Keyes	174	2075	549,214,974
575	Laverne	511	2051	540,638,894
574	Aline	257	2005	527,778,950
573	Red Rock	160	1976	503,154,230
572	Texhoma	208	1972	487,637,403
571	Peckham	69	1946	485,497,791
570	Alva	1125	1935	471,595,721
569	Moton	480	1935	465,714,835
568	Cherokee	428	1930	465,714,835
567	Kildare	69	1895	463,049,730
566	Shattuck	355	1893	444,408,975
565	Maple	66	1889	443,343,927
564	Arapaho	244	1847	441,215,251
563	Carter	111	1805	418,866,925
562	Okeene	411	1792	396,528,847
561	Hooker	423	1787	389,616,123
560	Billings	212	1780	386,959,438
559	Leonard	86	1778	383,243,040
558	Cheyenne	342	1757	382,181,636
557	Gotebo	121	1752	371,038,700
556	Hennessey	787	1691	368,387,330
555	Burbank	55	1681	336,047,997
554	Helena-Goltry	467	1675	330,754,337

553	Camargo	55	1671	327,578,471
552	Gage	182	1663	325,463,095
551	Shidler	316	1657	321,232,783
550	Pond Creek	350	1654	318,061,141
549	Gould	129	1636	316,476,268
548	Manitou	47	1626	306,973,330
547	Eldorado	117	1620	301,695,210
546	Goodwell	194	1611	298,528,620
545	Fairview	744	1604	293,779,788
544	Covington	387	1602	290,087,610
543	Okarche	340	1591	289,034,190
542	Weleetka	527	1590	283,244,637
541	Thomas	373	1589	282,718,654
540	Fargo	226	1550	282,193,198
539	Greenfield	157	1547	261,714,961
538	Zaneis	52	1540	260,140,390
537	Felt	114	1530	256,467,490
536	Keota	571	1522	251,221,010
535	Roosevelt	169	1509	247,024,738
534	Centrahoma	42	1503	240,213,219
533	Washita	179	1497	237,070,455
532	Canton	412	1496	233,927,943
531	Harrah	1335	1494	233,404,370
530	Butler	155	1493	232,881,209
529	Hammon	223	1474	231,837,557
528	Kremlin	289	1474	221,925,808
527	Boise City	465	1463	221,925,808

526	Lone Wolfe	205	1451	216,193,059
525	Guymon	2008	1448	209,944,731
524	Moss	172	1445	208,383,264
523	Anadarko	1899	1442	206,827,821
522	Braman	176	1428	205,272,894
521	Dougherty	31	1425	198,043,154
520	Bow Ring	106	1421	196,494,452
519	Calumet	225	1415	194,429,640
518	Mulhall	267	1395	191,333,058
517	Oologah	1095	1390	181,015,618
516	Elk City	1637	1384	178,437,593
515	Indian Camp	79	1384	175,350,533
514	Pioneer	504	1381	175,350,533
513	Dover	294	1379	173,812,151
512	Osage	62	1377	172,787,571
511	Mt. View	324	1368	171,763,579
510	Sharon	302	1368	167,156,173
509	Marland	186	1367	167,156,173
508	Sayre	669	1357	166,644,865
507	Kingfisher	1064	1348	161,533,645
506	Barnsdall	464	1346	156,939,568
505	Davidson	170	1342	155,920,790
504	Geary	433	1339	153,885,090
503	Boley	351	1331	152,358,825
502	Joy	70	1327	148,292,249
501	Riverside	91	1326	146,260,365
500	Shamrock	34	1317	145,752,464

499	Fairfax	456	1312	141,182,174
498	Drummond	280	1298	138,643,294
497	Sperry	806	1295	131,540,814
496	Union City	206	1291	130,019,694
495	Hominy	666	1290	127,994,758
494	Cleora	86	1288	127,488,730
493	Pawhuska	1030	1287	126,478,006
492	Hydro	291	1282	125,972,730
491	Garber	431	1278	123,451,500
490	Duke	162	1268	121,435,680
489	Erick	304	1264	116,400,440
488	Chickasha	2841	1260	114,386,992
487	Kaw City	36	1258	112,374,760
486	Supply	210	1258	111,374,326
485	Tyrone	248	1254	111,374,326
484	Alfalfa	63	1251	109,374,442
483	Pernell	168	1247	107,875,273
482	Tupelo	287	1240	105,876,633
481	Darlington	77	1238	102,380,189
480	Tulsa	52033	1230	101,381,779
479	Wynona	198	1222	97,388,755
478	Watonga	1005	1221	93,811,995
477	Chattanooga	208	1213	93,365,098
476	Sentinel	357	1213	89,797,962
475	Velma	632	1208	89,797,962
474	Amber	415	1197	87,571,327
473	Binger	325	1194	82,679,682

472	Oakdale	100	1192	81,346,842
471	Kinta	245	1173	80,458,932
470	Verden	330	1164	72,025,687
469	Morrison	343	1163	68,033,197
468	Alluwe	205	1162	67,589,917
467	Oklahoma City	39719	1161	67,146,980
466	Union	4412	1158	66,704,248
465	Minco	414	1154	65,495,209
464	Ardmore	3333	1152	63,900,805
463	Ryan	230	1147	63,104,431
462	McAlester	3385	1145	61,130,161
461	Stratford	424	1144	60,340,913
460	Crooked Oak	852	1143	59,949,674
459	Enid	6942	1143	59,558,859
458	Greenville	58	1141	59,558,859
457	Oglesby	59	1141	58,792,817
456	Bearden	75	1140	58,792,817
455	Wapanucka	182	1138	58,409,913
454	Nuyaka	48	1135	57,644,255
453	Bray	372	1134	56,496,314
452	Depew	354	1133	56,113,715
451	Jenks	4976	1130	55,731,488
450	Prue	273	1129	54,585,869
449	Berry Hill	665	1127	54,208,972
448	Flower Mound	69	1127	53,455,724
447	Yukon	4444	1121	53,455,724
446	Martha	75	1120	51,200,384

445	Gypsy	75	1119	50,828,938
444	Pryor	2384	1118	50,457,567
443	Springer	203	1118	50,086,271
442	Byng	1348	1116	50,086,271
441	Duncan	3676	1116	49,348,853
440	Ponca City	5419	1115	49,348,853
439	Weatherford	1369	1114	48,985,168
438	Newkirk	705	1110	48,626,902
437	Verdigris	334	1109	47,199,314
436	Carnegie	753	1106	46,843,122
435	Stillwater	4107	1105	45,775,548
434	Bethany	791	1104	45,420,443
433	Burns Flat	542	1104	45,069,445
432	Woodward	2654	1102	45,069,445
431	Boswell	437	1101	44,370,115
430	Lenapah	221	1099	44,023,104
429	Moffett	104	1099	43,329,956
428	Fort Cobb	368	1095	43,329,956
427	Ada	2068	1094	41,944,960
426	Rush Springs	587	1093	41,599,079
425	Waurika	548	1092	41,255,266
424	Boone	46	1091	40,912,040
423	Coalgate	600	1091	40,569,362
422	Mustang	2709	1089	40,569,362
421	Lindsay	1164	1088	39,885,298
420	Terral	149	1087	39,545,975
419	Hollis	639	1085	39,207,816

418	Mangum	770	1084	38,531,796
417	Coyle	291	1078	38,194,425
416	Dustin	136	1074	36,174,819
415	Hinton	542	1074	34,829,579
414	N. Rock Creek	144	1074	34,829,579
413	Briggs	271	1073	34,829,579
412	Cushing	1619	1073	34,494,091
411	Ralston	196	1072	34,494,091
410	Arnett	115	1068	34,160,493
409	Altus	5026	1067	32,826,885
408	Holdenville	1190	1067	32,493,598
407	Hugo	1782	1067	32,493,598
406	Temple	352	1067	32,493,598
405	Blackwell	1594	1066	32,493,598
404	Calera	414	1066	32,168,661
403	Tecumseh	1433	1065	32,168,661
402	Hartshorne	941	1064	31,845,732
401	Bartlesville	6375	1063	31,524,236
400	Sparks	52	1062	31,203,681
399	Perry	1248	1061	30,889,501
398	Coweta	1687	1060	30,575,373
397	Maysville	510	1060	30,262,493
396	Clinton	1676	1059	30,262,493
395	Merrett	261	1057	29,951,810
394	Paoli	199	1057	29,333,796
393	Tuttle	1070	1057	29,333,796
392	Tipton	469	1055	29,333,796

391	Granite	362	1052	28,718,842
390	Ft. Gibson	1100	1050	27,797,818
389	Durant	2121	1049	27,184,526
388	Ketchum	417	1049	26,878,980
387	Berwyn	71	1048	26,878,980
386	Welch	409	1048	26,575,972
385	Deer Creek	670	1047	26,575,972
384	Shawnee	4138	1047	26,273,444
383	Dill City	214	1045	26,273,444
382	North Enid	1073	1045	25,678,004
381	Big Pasture	224	1043	25,678,004
380	Grove	1338	1043	25,085,138
379	Okemah	854	1043	25,085,138
378	Comanche	903	1042	25,085,138
377	Connerville	45	1042	24,791,121
376	El Reno	2429	1041	24,791,121
375	Friend	140	1041	24,498,052
374	Apache	612	1040	24,498,052
373	Stigler	989	1039	24,207,552
372	Paden	295	1038	23,917,664
371	Nowata	1075	1037	23,628,765
370	Purcell	947	1037	23,340,161
369	Crescent	555	1036	23,340,161
368	Arkoma	472	1035	23,053,579
367	Ninnekah	546	1033	22,767,552
366	South Coffeyville	209	1033	22,196,442
365	Yale	522	1033	22,196,442

364	Carney	261	1031	22,196,442
363	Bokchito	248	1029	21,627,887
362	Snyder	434	1029	21,059,852
361	Stroud	952	1029	21,059,852
360	Sasakwa	327	1028	21,059,852
359	Bishop	131	1027	20,777,469
358	Guthrie	2589	1027	20,495,413
357	Pauls Valley	1493	1027	20,495,413
356	Shady Point	110	1026	20,495,413
355	Castle	56	1024	20,217,570
354	Central	253	1024	19,662,104
353	Piedmont	658	1024	19,662,104
352	Norman	8405	1023	19,662,104
351	Leon	53	1022	19,385,338
350	Nashoba	58	1022	19,116,977
349	Waukomis	431	1022	19,116,977
348	Sallisaw	2034	1020	19,116,977
347	Vanoss	494	1020	18,581,339
346	Broken Arrow	8026	1019	18,581,339
345	Dewey	1059	1018	18,316,048
344	Muskogee	6935	1018	18,058,783
343	Oney	190	1018	18,058,783
342	Allen	490	1017	18,058,783
341	Miami	2585	1016	17,809,702
340	Twin Hills	95	1016	17,561,111
339	Blue Jacket	268	1014	17,561,111
338	Okmulgee	2938	1014	17,069,289

337	Broxton	122	1013	17,069,289
336	Fox	514	1013	16,826,584
335	Southside	136	1013	16,826,584
334	Vinita	1481	1013	16,826,584
333	Caney	268	1012	16,826,584
332	Delaware	199	1012	16,586,132
331	Alex	306	1011	16,586,132
330	Eufaula	1009	1011	16,346,147
329	Elmore City	414	1010	16,346,147
328	Gracemont	274	1010	16,107,477
327	Luther	407	1009	16,107,477
326	Catoosa	1734	1005	15,869,495
325	Eakly	214	1005	14,919,195
324	Gore	437	1004	14,919,195
323	Sapulpa	4080	1003	14,683,568
322	Turkey Ford	48	1003	14,448,378
321	Haskell	832	1002	14,448,378
320	Perkins	757	1002	14,217,316
319	Frederick	1258	1001	14,217,316
318	Hobart	970	999	13,987,843
317	Long Dale	127	998	13,531,413
316	Latta	553	997	13,304,168
315	Boynton	210	996	13,077,050
314	Western Heights	3465	996	12,850,485
313	Lawton	17585	995	12,850,485
312	Roff	294	995	12,627,595
311	Kingston	707	994	12,627,595

310	Millwood	1151	994	12,422,584
309	Sand Springs	1151	994	12,422,584
308	Wayne	474	992	12,219,431
307	Collinsville	1702	991	12,021,251
306	Checotah	1293	990	11,823,545
305	Marlow	1263	990	11,627,541
304	Prague	856	990	11,627,541
303	Sulphur	1250	990	11,627,541
302	Atoka	1012	988	11,627,541
301	Moore	12081	988	11,244,857
300	Pawnee	749	988	11,244,857
299	Glencoe	251	987	11,244,857
298	Jones	701	985	11,067,357
297	Choteau	648	984	10,712,859
296	McLoud	1233	984	10,536,311
295	Madill	1125	982	10,536,311
294	Owasso	2987	982	10,186,977
293	Stonewall	411	982	10,186,977
292	Stringtown	253	982	10,186,977
291	Washington	517	982	10,186,977
290	Tonkawa	709	981	10,186,977
289	Walters	753	981	10,017,603
288	Olney	184	979	10,017,603
287	Pleasant Grove	85	979	9,681,779
286	Wynnewood	833	979	9,681,779
285	Commerce	768	978	9,681,779
284	Caney Valley	699	977	9,514,969

283	Westville	818	977	9,348,927
282	Howe	238	976	9,348,927
281	Kiowa	400	975	9,184,402
280	Lone Grove	794	975	9,020,115
279	Olustee	194	975	9,020,115
278	Schwartz	200	975	9,020,115
277	Cyril	371	974	9,020,115
276	Red Oak	311	974	8,857,416
275	Academy Central	440	973	8,857,416
274	Broken Bow	1924	973	8,695,399
273	Cleveland	1535	973	8,695,399
272	Liberty	549	973	8,695,399
271	Fillmore	48	972	8,695,399
270	Stuart	268	972	8,537,830
269	Wellston	462	972	8,537,830
268	Hulbert	447	971	8,547,830
267	Mannsville	121	969	8,381,039
266	Putnam City	18082	969	8,068,351
265	Wewoka	1103	968	8,068,351
264	Cordell	714	967	7,930,210
263	Davis	721	967	7,793,172
262	Fort Towson	478	967	7,793,172
261	Healdton	698	967	7,793,172
260	Bixby	2293	966	7,793,172
259	Midwest City	16431	966	7,658,745
258	Dewar	479	965	7,658,745
257	McCurtain	256	965	7,543,042

256	Roland	930	965	7,543,042
255	Davenport	355	964	7,543,042
254	Big Cabin	209	963	7,429,004
253	Inola	868	962	7,315,321
252	Bowlegs	358	961	7,201,847
251	Panama	623	960	7,089,241
250	Tishomingo	812	960	6,976,993
249	Bethel	948	959	6,976,993
248	Graham	158	959	6,866,180
247	Valliant	971	959	6,866,180
246	Little Axe	461	957	6,866,180
245	Mt. Park	131	956	6,648,708
244	Middleberg	80	955	6,540,433
243	Sequoyah	797	954	6,432,289
242	Skiatook	1497	954	6,324,255
241	St. Louis	65	953	6,324,225
240	Claremore	2759	952	6,218,455
239	Wilson	594	952	6,112,750
238	Spiro	1368	951	6,112,750
237	Chandler	868	950	6,010,398
236	Lahoma	235	950	5,909,414
235	Poteau	1533	950	5,909,414
234	Stony Point	77	950	5,909,414
233	Bristow	1559	948	5,909,414
232	Clayton	427	947	5,712,872
231	Lexington	747	947	5,616,160
230	Edmond	7308	946	5,616,160

229	Empire	433	946	5,520,622
228	Tahlequah	2791	946	5,520,622
227	Vian	999	946	5,520,622
226	Mill Creek	234	944	5,520,622
225	Adair	605	943	5,352,608
224	Morris	810	943	5,268,835
223	Quinton	454	943	5,268,835
222	Drumright	688	942	5,268,835
221	Mannford	1092	942	5,186,931
220	Kansas	605	941	5,186,931
219	White Oak	193	941	5,106,807
218	Silo	424	939	5,106,807
217	Antlers	1146	938	4,948,155
216	Wilburton	938	938	4,869,253
215	Plain View	759	937	4,869,253
214	Ripley	389	937	4,792,435
213	Wetumka	533	937	4,792,435
212	Bokoshe	309	936	4,792,435
211	Wagoner	1824	936	4,717,298
210	Whitehead	121	935	4,717,298
209	Glenpool	377	934	4,644,294
208	Lost City	186	934	4,571,411
207	Stillwell	1370	934	4,571,411
206	Warner	721	934	4,571,411
205	Canadian	233	933	4,571,411
204	Noble	1494	933	4,501,182
203	Carter	132	932	4,501,182

202	Thackerville	233	932	4,432,680
201	Jay	1456	930	4,432,680
200	Dickson	1120	928	4,296,406
199	Talihina	577	928	4,163,044
198	Crutcho	297	927	4,097,483
197	Byars	78	926	4,032,492
196	Cement	386	926	3,967,794
195	Meeker	671	926	3,967,794
194	Seminole	1377	926	3,967,794
193	Mason	212	925	3,967,794
192	Tushkahoma	58	925	3,905,608
191	Newcastle	1058	924	3,905,608
190	Heavener	737	923	3,843,692
189	Locust Grove	1129	922	3,782,834
188	Kiefer	459	921	3,722,713
187	Picher	607	921	3,663,721
186	Kellyville	979	920	3,663,721
185	Colcord	595	919	3,605,795
184	Caddo	393	918	3,548,854
183	Pacola	698	918	3,492,502
182	Earlsboro	229	917	3,492,502
181	Oaks Mission	418	917	3,437,241
180	Alderson	72	916	3,437,241
179	Choctaw	3413	916	3,382,627
178	Pittsburg	167	915	3,382,627
177	Asher	214	914	3,331,498
176	Indiahoma	241	914	3,280,536

175	Blanchard	802	913	3,280,536
174	McLish	216	913	3,230,029
173	Beggs	769	911	3,230,029
172	Grandview	260	910	3,131,051
171	Muldrow	1274	910	3,082,331
170	White Rock	91	910	3,082,331
169	Chelsea	911	909	3,082,331
168	Elgin	883	909	3,035,236
167	Swink	58	909	3,035,236
166	Liberty	205	908	3,034,236
165	Vamoosa	66	908	2,989,993
164	Allen Bowden	267	907	2,989,993
163	Wann	169	906	2,945,021
162	Wyandotte	625	906	2,900,316
161	Grandfield	386	905	2,900,316
160	Bennington	256	904	2,856,325
159	Krebs	272	904	2,812,800
158	Turner	330	901	2,812,800
157	Fairland	476	900	2,683,809
156	Idabel	2039	900	2,641,142
155	Dibble	463	899	2,641,142
154	Ringling	542	899	2,600,990
153	Mounds	489	898	2,600,990
152	Dale	401	897	2,561,843
151	Lookeba	455	897	2,523,185
150	Porter	498	897	2,523,185
149	Blair	346	896	2,523,185

148	Haworth	671	896	2,485,881
147	Milburn	204	896	2,485,881
146	Buffalo Valley	232	895	2,485,881
145	Afton	520	894	2,449,798
144	Central High	314	894	2,413,947
143	Quapaw	533	894	2,413,947
142	Pioneer	108	893	2,413,947
141	Marietta	809	891	2,379,463
140	Osage Hills	96	891	2,310,711
139	Hilldale	910	890	2,310,711
138	Lukfata	194	889	2,277,240
137	Avant	84	888	2,244,679
136	Copan	373	888	2,212,312
135	Rattan	459	887	2,212,312
134	McCord	203	886	2,180,402
133	Medicine Park	63	886	2,148,951
132	Butner	427	885	2,148,951
131	Colbert	710	885	2,117,766
130	Cache	704	884	2,117,766
129	Webbers Falls	313	883	2,087,718
128	Battiest	425	882	2,058,374
127	Tushka	305	882	2,029,343
126	Haleyville	415	881	2,029,343
125	Grant	302	880	2,001,042
124	Calvin	274	879	1,973,156
123	Agra	243	876	1,945,572
122	Panola	269	876	1,863,642

121	Smithville	423	876	1,863,642
120	Braggs	244	875	1,863,642
119	Savanna	466	875	1,837,267
118	Maud	483	873	1,837,267
117	Okay	501	873	1,785,937
116	Salina	778	872	1,785,937
115	Lehigh	41	871	1,761,256
114	Olive	466	871	1,737,353
113	Liberty	68	870	1,737,353
112	Oilton	370	867	1,713,957
111	Canute	290	865	1,643,973
110	Wright City	604	863	1,598,057
109	Woodall	179	862	1,552,721
108	Wister	366	858	1,530,657
107	Wanette	397	857	1,443,117
106	Eagletown	325	856	1,421,598
105	Sterling	395	856	1,400,476
104	Bentley	58	854	1,400,476
103	Coleman	174	854	1,359,672
102	Indianola	407	854	1,359,672
101	Strother	334	854	1,359,672
100	Spavinaw	103	851	1,359,672
99	Utica	43	851	1,301,385
98	Graham	239	850	1,301,385
97	Faxon	67	849	1,282,102
96	Gregory	40	849	1,263,058
95	Wilson	157	848	1,263,058

94	Fletcher	399	846	1,244,121
93	Justice	57	844	1,206,561
92	Keystone	303	844	1,169,799
91	Soper	302	844	1,169,799
90	Pleasant Grove	210	843	1,169,799
89	Whitefield	66	841	1,152,080
88	Varnum	222	840	1,117,062
87	Yuba	198	840	1,099,619
86	Grove	185	838	1,099,619
85	Justus	195	838	1,065,573
84	Dubois	217	837	1,065,573
83	Cave Springs	344	835	1,048,930
82	Achille	296	833	1,016,078
81	Keys	259	832	983,914
80	Lone Star	513	832	968,128
79	Gum Springs	122	830	968,128
78	Leflore	293	830	938,100
77	Oktaha	421	830	938,100
76	Skelly	96	830	938,100
75	Cottonwood	63	829	938,100
74	Dahlonegah	93	829	924,018
73	Bell	128	827	924,018
72	Macomb	284	826	896,166
71	Cameron	326	825	882,368
70	Navajo	387	821	868,854
69	Jennings	101	820	816,102
68	Tom	166	820	803,301

67	Foyil	339	818	803,301
66	Langston	72	816	778,233
65	Glover	134	815	753,843
64	Walker	70	813	741,720
63	Crowder	400	810	717,742
62	Holly Creek	148	807	681,985
61	Geronimo	340	806	647,428
60	Greasy	206	803	636,057
59	Falls	363	802	632,664
58	Whitesboro	318	802	621,839
57	Stidham	96	801	621,839
56	Fanshawe	86	800	611,695
55	Denison	208	799	601,647
54	Marble City	179	799	591,685
53	Frink	145	798	591,685
52	Zion	168	797	582,110
51	Blue	256	794	572,680
50	Moseley	165	789	544,894
49	Midway	190	788	499,864
48	Ravia	113	788	491,023
47	Gans	354	786	491,023
46	Maryetta	193	783	473,947
45	Farris	126	782	449,395
44	New Lima	318	782	441,404
43	Ryal	71	781	441,404
42	South Rock Creek	214	779	433,857
41	Goodland	50	778	418,905

40	Preston	276	776	411,641
39	Haywood	171	775	397,217
38	Oak Grove	92	775	390,281
37	Leach	124	774	390,281
36	Belfonte	199	773	383,608
35	Albion	70	768	377,059
34	Harmony	186	768	345,309
33	Hanna	194	765	345,309
32	Peavine	200	765	327,027
31	Schulter	245	764	327,027
30	Bridge Creek	295	762	321,327
29	Robin Hill	116	755	310,417
28	Hodgen	91	753	274,297
27	Lowrey	99	750	264,209
26	Henryetta	1302	747	249,350
25	Grandview	94	746	234,788
24	Tiawa	108	740	231,236
23	Wainwright	86	740	210,488
22	Watson	96	736	210,488
21	Lane	159	734	197,432
20	Forest Grove	120	731	191,096
19	Wickliffe	49	730	182,069
18	Pickett	105	729	179,180
17	Brushy	123	727	176,340
16	Pleasant View	146	726	170,870
15	Tenkiller	167	720	168,258
14	Watts	405	720	153,462

13	Norwood	78	708	153,462
12	Tannehill	86	698	130,734
11	Pretty Water	156	691	112,574
10	Anderson	175	690	100,464
9	Kenwood	104	687	98,890
8	Peggs	189	685	94,693
7	Moyers	94	684	92,103
6	Rocky Mountain	102	679	90,997
5	Monroe	119	657	85,937
4	Christie	111	638	65,917
3	Nobletown	68	635	50,888
2	Porum	520	563	48,848
1	Shady Grove	92	511	4,784

VITA

David Ray Owens

Candidate for the Degree of

Doctor of Education

Thesis: A NEW FINANCE FORMULA DESIGNED TO STRENGTHEN EQUAL EDUCATIONAL OPPORTUNITY FOR STUDENTS IN OKLAHOMA PUBLIC SCHOOLS WHEN COMPARED TO CRITERIA ESTABLISHED BY THE NATIONAL EDUCATIONAL FINANCE PROJECT

Major Field: Educational Administration

Biographical:

Personal Data: Born in Folsom, Oklahoma, May 5, 1941, the son of Mr. and Mrs. Roy E. Owens.

Education: Graduated from Caddo High School, Caddo, Oklahoma in May, 1959; received the Bachelor of Science in Education degree from Southeastern Oklahoma State University, Durant, Oklahoma, with a major in mathematics in 1963; enrolled in the graduate program at Southeastern, 1963; attended Oklahoma City University, Oklahoma City, Oklahoma, Central State University, Edmond, Oklahoma, and Oklahoma State University, Stillwater, Oklahoma, 1965-66; received the Master of Teaching degree in Educational Administration from Southeastern in 1966; continued graduate study at Oklahoma State University, 1967-1969 and at Wichita State University, Wichita, Kansas, 1969-70; enrolled in doctoral program at Oklahoma State University, 1978; completed requirements for the Doctor of Education degree at Oklahoma State University in May, 1980.

Professional Experience: High School Principal, Morrison Public Schools, Morrison, Oklahoma, 1963-1965; Mathematics Teacher, Oklahoma City Public Schools, 1965-1966; Superintendent of Quay Public Schools, Yale, Oklahoma, 1966-1968; Superintendent of Marshall Public Schools, Marshall, Oklahoma, 1968-1971; Superintendent of Piedmont Public Schools, Piedmont, Oklahoma, 1971-present.